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Original Articles

SPINAL CORD TUMORS AND OTHER FOCAL SPINAL LESIONS*

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The focal lesions of the spinal cord that may require surgical treatment may be grouped under the following headings:

1. Tumors.
2. Fractures or dislocations.
3. Inflammatory processes, local or diffuse.
4. So-called myelitic lesions.
5. Congenital lesions.

I shall confine my remarks today to the tumors, so-called myelitic lesions, and the inflammatory processes. If time permits, I may say a few words about the traumatic conditions.

In order to make the diagnosis and localization in a spinal lesion, we make use of the following symptoms and tests:

1. Paralyses, either spastic or flaccid, of the muscles.
2. Changes in reflexes.
3. Sensory disturbances.
4. Lumbar puncture and Quackenstedt test.
5. Bladder examination with Rose's cystometer.
6. X-ray.
7. Special examinations, such as lipiodol or air injections.
8. Vaso-motor disturbances.

Let me say at the very outset that, though a careful history always must precede the examination, it is of far less importance or help in a spinal case than in an intracranial case. The one point of great importance in a spinal case is whether the symptoms have come on suddenly or gradually. Though the symptoms may come on suddenly, it is very unusual for them to do so. One striking exception to this rule is involvement of the bladder; in two cases I have had of tumors of the filum terminale, which are shortly to be made the basis of a special paper before the American Neurological Association, the patient's first symptom was acute retention of urine. These two patients sought a urologist and, fortunately for them, fell into the hands of Dr. D. K. Rose, the inventor of the cystometer. He immediately recognized that the bladder disturbance was due to a central nervous lesion and not to any disturbance in the bladder or prostate. I have seen a number of patients with cord tumors who were treated for a supposed enlarged prostate and one man, a brother of a doctor, had his prostate removed by his doctor brother without relief of his urinary symptoms, however, until his spinal tumor had been removed.

Our problem is to determine the level of a lesion in the cord. Let us see how the eight tests I have referred to enable one to determine this.

1. The paralyses of muscles. If the cord is so markedly compressed that all function is lost below the level of compression, the muscles will be spastic, sometimes so much so that they are like bands of iron and joints can only be flexed or extended with the greatest difficulty. At the level of the lesion the muscles may be flaccid, due to the fact that the peripheral neurone, or part of it, is out of function. But, with one exception, the condition of the muscles does not give one exact information as to the level of the segment involved. The one exception is the presence of what is known as Beevor's sign, an invaluable, but much neglected test. When a lesion is located at the level of the ninth or tenth dorsal spinal segment, the lower portion of the rectus muscles may be paralyzed, consequently when the patient is directed to raise his head the umbilicus moves up, pulled up by the upper part of the rectus which is intact. The umbilicus may move up an inch or two. This constitutes Beevor's sign. Normally, if the upper and lower portions of the rectus are intact, when the patient flexes his head the umbilicus remains stationary though

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

it may be retracted. Of course, the test must be carried out with the patient lying flat on his back. A positive Beevor's sign gives one as accurate a level diagnosis as any sensory disturbance.

2. The reflexes below a compression lesion of the cord are increased, the patient is spastic and all the pathological reflexes may be observed—ankle and patellar clonus, Oppenheim and Babinski. If the lesion happens to be at a segment of the cord through which a reflex arc passes, one may note increased reflexes below the lesion, one or more absent reflexes at the level of the lesion, and normal reflexes above the lesion. It is only in lesions of the cervical or lumbar cord that such differentiation by means of reflexes is impossible. I have seen a number of cases where the exact segment could be determined because the biceps reflex was present and the triceps reflex was absent.

3. The most valuable test, however, of a focal lesion still remains the sensory examination. But there are sensory and sensory examinations and I find that mistakes frequently occur because some of the simplest and most fundamental precautions are neglected.

First, a sensory examination to be of value should be done in a quiet, warm room. When relative changes in sensation are being examined for, the patient's undivided attention is necessary and therefore he must not be distracted. When a patient is totally anesthetic below a certain point, of course, such a precaution is not so necessary. Second, the temperature of the room is also important as patients cannot discriminate so well if they are cold. Third, the patient must be stripped and uncovered as the weight of the bed clothes may distract him and influence his answers.

Figure 1. Extradural endothelioma lying in front of the ligamentum denticulatum.

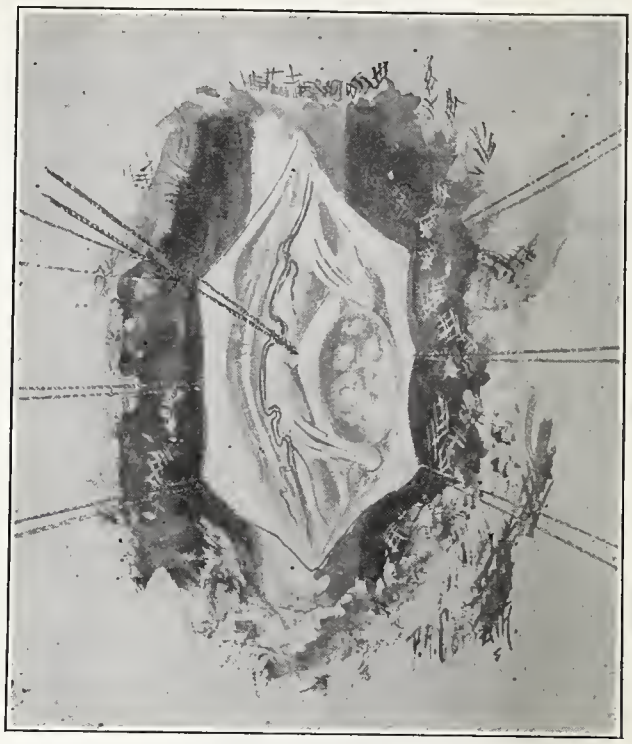

Figure 2. Appearance of tumor after ligamentum denticulatum had been reflected.

Sensory examinations are ordinarily made with cotton-wool, a sharp pin, and hot and cold test tubes, but occasionally one's ingenuity is hard put to it to establish a sensory level. I recall a patient, a high-strung French woman, whom I suspected of having a spinal tumor. Her legs were spastic, but I never could find a definite level with the ordinary tests. Finally, one day when it was very hot, I tested her with a small cake of ice and definitely established a sensory level. I took out the tumor, a very small one, and she has been perfectly free of symptoms since. It is not very often that one removes a spinal tumor and has all spasticity and sensory loss clear up, but this was one case in which it did occur. Sensory levels to be of value must be found at the same level at several examinations.

4. These first three sets of tests indicate the level of a lesion, but they throw no light on the pathology. A tumor or focal inflammatory process causes a block, partial or complete, of the cerebrospinal fluid. Therefore we always use the test devised by James B.

Figure 3. Type of cascular lesion which cannot be removed by the ordinary surgical methods, but which might be dealt with by electro-surgical methods.

Ayer of Boston, known as the Quackenstedt test. This consists of doing a lumbar puncture with the patient on his side and connecting the needle with a fine caliber glass tube. If there is a block in the subarachnoid space interfering with free movement of the cerebrospinal fluid, on compressing both jugulars the fluid will not rise, while if there is no block it will rise and fall rapidly. If there is a partial block, it may rise slowly and very slowly regain its original level. In addition to this, the fluid below a lesion may be yellow, coagulate, and have a higher protein content than fluid taken out above the lesion, preferably at the cisterna magna.

I have seen a negative Quackenstedt in a number of spinal tumors, especially intramedullary ones or where the tumor was too small to cause a block but, as a rule, the Quackenstedt is positive in the case of a tumor.

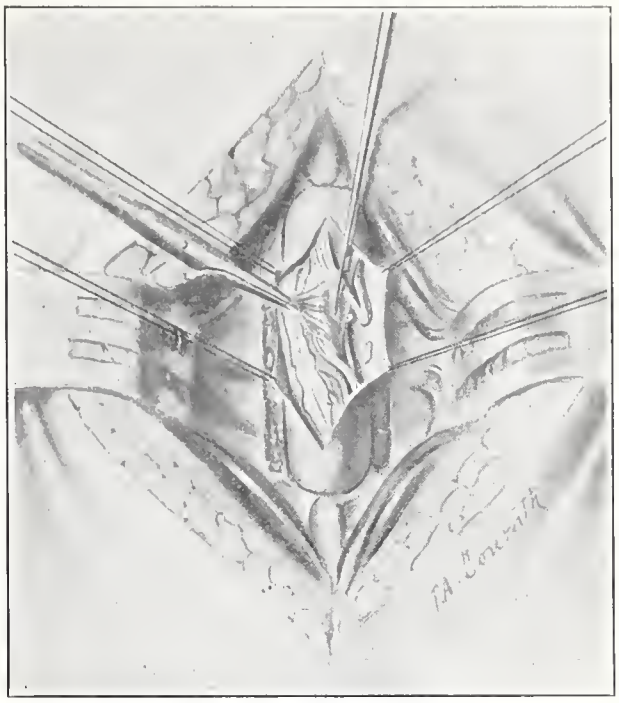

Figure 4. This shows the way in which the spinal cord may be rotated by grasping the ligamentum denticulatum; also shows the way in which the anterolateral column is cut in a chordotomy.

If the history indicates a slowly progressing lesion, a negative Quackenstedt test would not, in my opinion, exclude a tumor.

I still believe, as I always have, that a patient with the evidence of a focal spinal lesion is entitled to an exploration, granted that the surgeon has mastered the technique of laminectomy.

5. The cystometric studies of Rose have been of great help in differentiating lesions above the bladder center in the cord, lesions of the bladder center, and lesions in the peripheral mechanism. To those particularly interested I would refer them to Dr. Rose's series of articles.

6 and 7. The x-ray, of course, must always be made use of but, with the exception of fractures or dislocations and very occasional bony or cartilaginous tumors compressing the

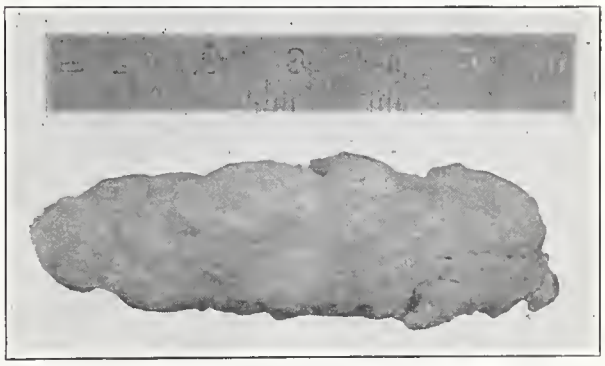

Figure 5. Picture of tumor with brief history of case.

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cord, it is of little value. When the level of a lesion cannot be determined by means of any of the foregoing signs, an opaque substance, lipiodol, may be injected into the cisterna magna and then followed by an x-ray picture with the patient in the upright position. If there is a lesion blocking or compressing the cord, it will be caught at that point and give a most beautiful picture, but as evidence accumulates we are coming to realize that lipiodol is by no means innocuous. It is not bland and harmless as was claimed by Sicard and Forrestier; it is irritating and causes a marked reaction, inflammation in the meninges. Within the past three or four months, Loyal Davis has published a striking piece of experimental work from his laboratory showing the pathological lesions produced by lipiodol. Others have reported similar observations and therefore I feel that it should not be used promiscuously but only with great caution. When I have used it I inject from 1 to 2 cc. of sterile lipiodol into the cisterna magna. Spinal air injection for determining the level of a tumor, though certainly far less irritating, has not been satisfactory in our hands, as the detail of the plate is not sufficiently clear.

8. About two years ago Fay reported a series of focal spinal lesions in which he claimed to be able to establish the level of the lesion by means of vaso-motor changes in the skin. By suddenly exposing the patient to cold air or to cold water, he was able to see a change in the skin segments above and be-

Figures 6 and 7. Patient with a Spinal Curvature of long standing. Paralyzed for eighteen months. Within twenty-four hours after operation movement in his legs began to return. Cord stretched over the Kyphos.

low the lesion. Though the report is of great interest, I have not found the test very valuable.

The problem of what to do for fractures and dislocations with cord symptoms has always been a difficult one and one on which men have differed very radically. There have been those who have advocated operating on fractures with cord symptoms, a second group who have advocated never operating on fractures, and the largest group that have held a middle course. I have belonged to the last group, but have, in the past years, operated fewer cases since Coleman has introduced the use of the Quackenstedt test in differentiating the operable from the inoperable cases. If the Quackenstedt test is positive, shows a block, a fragment of bone is compressing the cord and operation is indicated, but if there is no block operation will be useless. The application of this test has done away with a good many unnecessary explorations. It is a most valuable contribution to the subject.

The very rare focal inflammatory lesions, abscesses, should be operated upon.

Now, about the diffuse inflammatory lesions —meningitis. I began to do spinal drainage in meningitis some ten or twelve years ago and I still do it, though lately—in the past two years—I have done a number of cisternal drainages in preference to lumbar drainages. The lumbar drainage is not a difficult surgical procedure, though the cisternal drainage is a very formidable one, especially in inexperienced hands. We have cases well today that would undoubtedly have died without operation, and though the mortality will be high it is, in my opinion, absolutely justified and indicated since the mortality without operation is practically one hundred percent.

Before closing, I must take up the question of what is myelitis and what can we do about it. A transverse lesion of the cord occurs suddenly without prodromal symptoms and produces a picture indistinguishable from tumor compression, but in these cases one never finds a positive Quackenstedt. We do not know anything about the pathology of this clinical picture and operation affords no relief. If there is any evidence of a block, these patients should be explored. When there is no

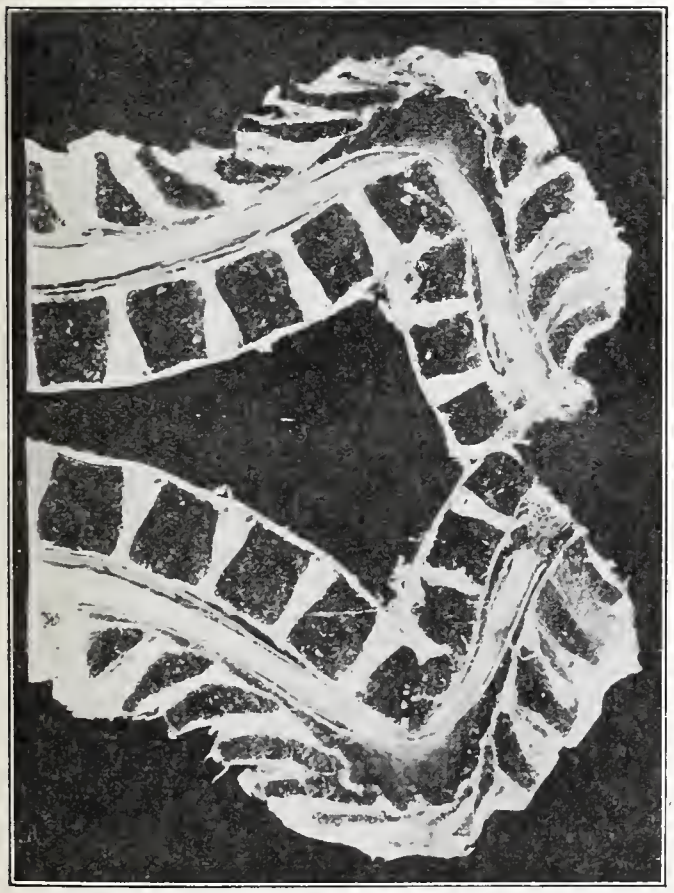

Figure Eight. Section of a spinal column showing identical condition found at operation of patient shown in Figures six and seven. Note the large collection of fat which is not a tumor, but merely filling up a ded space.

Figure 9. Example of how the globules of lipiodol are caught by a tubercle in the region of the ninth and tenth dorsal vertebrae. On account of the age of the child, only 1 c. c. of lipiodol was used instead of the usual quantity of 2 c. c.

block, the neurological surgeon will have to judge the case on its merits.

SUMMARY

1st. A tumor of the spinal cord is a surgical disease.

2nd. Every patient with a lesion of the cord on whom a definite level can be established should be considered a potential surgical problem.

3rd. The usual motor and sensory tests, together with the Quackenstedt test, are adequate as a rule to make the diagnosis.

4th. The injection of a foreign substance, which is non-absorbable, into the spinal subarachnoid space is a procedure to be used with great caution.

5th. Drainage in meningitis, until some better procedure is discovered, is recommended in selected cases.

DISCUSSION

DR. GEO. B. FLETCHER, Hot Springs: Being especially interested in the type of patient referred to in Dr. Sachs' most interesting paper, I should like to make a few comments. I have had the pleasure of having Dr. Sachs see quite a number of these cases for me and it has been our good fortune in many instances to have a good return of function in so many of these patients, and the results have been so satisfactory that I wonder what might have occurred if we hadn't taken the steps Dr. Sachs has taken.

From the standpoint of going into a discussion of the different methods he has mentioned, I am very glad to have him mention one thing in particular, and that is the use of lipiodol, which I have never used. I wrote him a letter recently to know if it might be safe to use in our clinic at Hot Springs and he convinced me this morning that it is best not to use it in a place like Hot Springs when we are not familiar with the technique, and when we wouldn't operate the patient in Hot Springs. It is best to have the patient, if I understand Dr. Sachs correctly, in a hospital where you can operate immediately. And in that event we would not and will not use lipiodol in these cases because it would necessitate the patient getting on the train and going to St. Louis which would, of course, cause a delay that wouldn't be good for the patient.

It goes without saying that I have enjoyed the Doctor's paper very much and feel that we are quite fortunate in having on our program a neurological surgeon of International reputation. I also feel proud that I am in part responsible for his being with us today.

DR. PAT MURPHEY, Little Rock: I have enjoyed Dr. Sachs' paper and lecture very much. I think he has covered the subject thoroughly. About the only comment I have to make is that I do urge the use of the Quackenstedt test, as I think it is of great value in determining when to

Figure 10. Triangular shaped mass of lipiodol at the lower end of the canal. When there is no obstruction it all collects in this way.

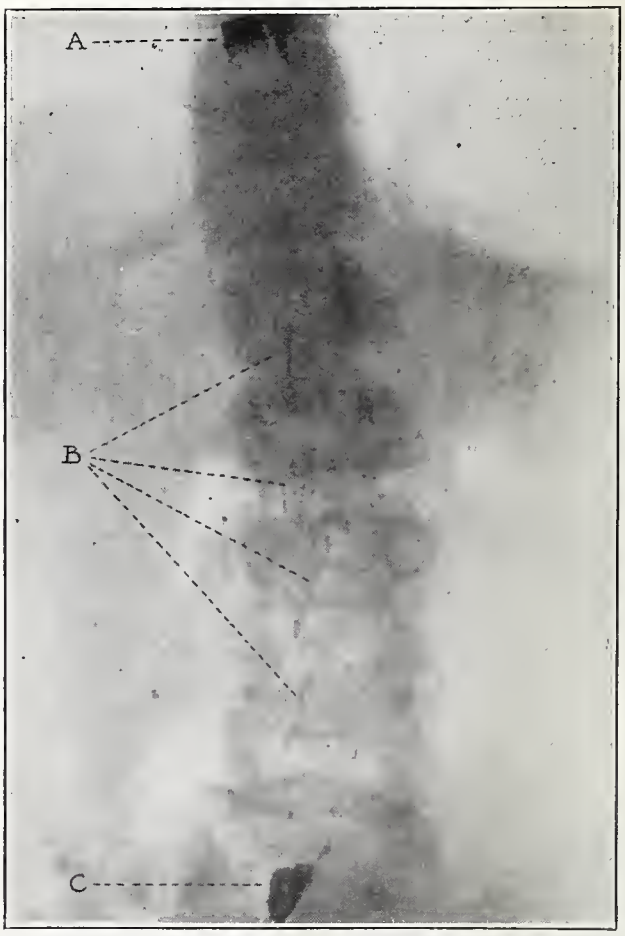

Figure 11. (a) Shows the lipiodol caught above the level of an extra-spinal endothelioma. (b) Shows streaks of lipiodol which have gotten by the tumor. (c) Shows a small triangular mass which has slipped all the way down to the bottom of the canal. This patient had no localizing level whatever, neither sensory nor motor, consequently lipiodol had to be used.

operate in fractures and dislocations. Dr. Sachs has had several patients from Arkansas upon whom he has operated. Some of them have come home a great deal better, while I have seen others where the improvement was probably not as great as Dr. Sachs expected. However, they came home showing improvement and the surgical treatment was well worth while, because, as Dr. Sachs said, the tumor is a surgical procedure.

DR. SACHS, in Closing: As regards the Quackenstedt test, I think Dr. Murphey is right to emphasize its value. I think its use in fracture cases is a very important one because evidently he has had the same experience before its introduction that I have had, of opening cases and not being able to do anything. Wasn't that it?

DR. MURPHEY: Right.

DR. SACHS: And since then it certainly has made one stop operating on a great many cases that heretofore we weren't sure about—whether we should or should not operate.

Regarding the other point that Dr. Murphey made, that just confirms what I said, that it is very unusual in a spinal tumor case for the patient to get a complete recovery because there is a certain amount of permanent injury to the cord from the prolonged compression. I have seen cases, I am sorry to say, in which I have removed the tumor in which there wasn't a particle of improvement. But, without wishing to "pass the buck," that's the tumor's fault and not mine.

TREATMENT OF THE CARDIAC ARRHYTHMIAS*

A. G. Sullivan, M. D., Hot Springs

At the meeting one year ago I had the pleasure of reading a paper on the clinical recognition of the more common irregularities of the heart beat. Today I would like to discuss for a few minutes the treatment of these arrhythmias:

1. Sinus Arrhythmia.
2. Premature Contractions (extra-systoles).
3. Heart Block.
4. Paroxysmal Auricular Tachycardia.
5. Auricular Flutter.
6. Auricular Fibrillation.
7. Alternation.

In order to conserve time I shall not present any case reports.

Sinus Arrhythmia

Sinus arrhythmia is the slight increase in heart rate observed during the process of breathing, particularly in children. It is easily recognized as a rule, but the phasic type, in which a series of normal beats is followed by a pause, may be confused with the dropped beats of heart block. The only reason for mentioning this type of irregularity is that it may be recognized as a normal variation and that a healthy child existing it may not be branded as having cardiac disease. No treatment is needed.

Premature Contractions

Premature contractions or extra-systoles are heart beats which disturb the normal cardiac rhythm by occurring too soon. They are due to impulses arising from the cardiac musculature. In early or middle adult life they are usually due to over-stimulation, e. g., tea, coffee, tobacco, alcohol, loss of sleep, worry or infectious. Removal of the exciting cause is usually sufficient to abolish them. If they still persist and annoy the patient quinidine sulphate in doses of 3 grains morning and night frequently brings relief.

In older people premature contractions, especially if numerous, are frequently a sign of cardiac disease usually of the arteriosclerotic type. Digitalis often eliminates trouble from this source and wards off approaching failure.

Heart Block

Heart block is a condition in which there is an absence of ventricular responses to auricular impulses wholly or in part. If there is complete failure of the ventricle to respond the condition is known as complete block; partial response of the ventricles is called partial heart block; delayed response is incomplete block or delayed A-V conduction time, a diagnosis to be made only with the electrocardiogram.

Treatment depends on the cause and the type. Etiology is most important in a consideration of the most desirable therapeutic procedures. In children and young adults, rheumatic fever is the most common cause, although congenital block is occasionally seen. In middle adult life syphilis becomes a factor to be reckoned with; in later life arteriosclerosis accounts for the majority of cases.

In partial heart block digitalis is distinctly contra-indicated. In high grade heart block such as may exist in auricular flutter where even with a 2:1 heart block present the ventricles are beating at a rate of 130 to 145, digitalis may be extremely useful as will be mentioned later.

In complete heart block, the condition in which there is complete dissociation of the auricles and ventricles, digitalis is seldom needed as congestive failure is seldom present.

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

Usually no treatment is necessary when the ventricular rate stays above 30. If the rate drops below 30, as it does sometimes to 10 or 20 beats a minute, the patient is liable to prolonged periods of asystole during which syncope occurs. This constitutes the Adams-Stokes syndrome.

Various drugs have been tried for the relief or prevention of these attacks. Digitalis is apt to increase their frequency. Adrenalin helps during the attack but due to its transient action has to be repeated every few hours and the attacks are apt to return with greater violence after its discontinuance.

Cohn and Levine (1) report good results in three cases by the use of barium chloride 30 mg. (½-gr.) by mouth three or four times a day. Barium chloride combined with ephedrine sulphate has given the best results in the hands of Marvin (2).

Cases with a syphilitic etiology often improve under specific treatment, the lesion being due to gummatous infiltration, although the complete block usually persists.

Paroxysmal Auricular Tachycardia

Paroxysmal auricular tachycardia is an abrupt acceleration of the regular heart beat, abruptly terminating and repeated from time to time. It is due to some ectopic focus acting as pace maker and fixing the rate higher than that of the normal pace maker, the sinus node. Paroxysmal tachycardia may be looked upon as a series of premature contractions, extra-systoles or ectopic beats. This viewpoint is borne out in part by the causative factors. Attacks may be precipitated by conditions such as chronic appendicitis, gall stones, colitis, pregnancy and syphilis. Removal of the exciting cause is followed by cessation of attacks. In those cases in which the underlying cause eludes detection, quinidine sulphate in 3 grain capsules once or twice a day serves to abort the attacks.

For the patient seen in an attack, pressure on the vagus nerve as it lies in the carotid sheath behind the angle of the jaw, or pressure on the eyeballs is often effective in stopping the paroxysm.

Auricular Flutter

Auricular flutter is a condition in which the normal beats of the auricle are superseded by a series of new and rhythmic impulses arising from an ectopic focus at a rate of from 200 to 350 per minute.

Flutter is almost invariably accompanied by heart block, usually 2:1, cutting the ventricular rate in half, usually 130 to 160. Occasionally 4:1 block is present and the ventricular rate may be within normal limits of 65 to 80.

Treatment is directed toward conversion of the flutter to normal rhythm. This is done by digitalizing the patient quickly. This procedure, by speeding up the conduction rate in the auricles converts the slower circus movement of flutter to the very rapid circus movement of fibrillation. At this point upon withdrawal of the drug a certain proportion of these cases will revert to normal rhythm. The proportion can be increased by using quinidine after fibrillation has been established by digitalis. Another advantage of quinidine is that by using a small prophylactic dose, fewer cases will revert to flutter or fibrillation and normal rhythm can be maintained for considerable periods of time.

If the attempt to convert the flutter to normal rhythm is unsuccessful, it is still possible for the patient to benefit greatly by digitalization. Where 2:1 block is present with a ventricular rate of from 130 to 140, this rate can be reduced to 65 or 70 by establishing a 4:1 block with consequent relief of symptoms of congestive failure.

Auricular Fibrillation

Auricular fibrillation is a condition in which the auricles fail to contract, but remain in a state of constant activity or fibrillary twitchings; the normal ventricular impulses are absent and are replaced by haphazard impulses from the auricle producing the most disordered action of any of the heart irregularities.

Sir Thomas Lewis has shown this condition to consist of a "circus movement," the contraction impulse rotating around the base of the great vessels emptying into the right auricle at a rate of from 450 to 600 per minute. Of this shower of impulses the auriculo-ventricular node is able to transmit to the ventricles from 90 to 200 per minute at irregular intervals. Not all of these ventricular contractions are strong enough to lift the aortic valves and be transmitted to the pulse, and a count at the apex and at the wrist will reveal a discrepancy of ten or more beats per minute, to which condition the term "pulse deficit" is applied.

Digitalis exerts its beneficial effect in this condition by increasing the refractory period

of the A-V node and limiting the number of impulses to the ventricles. This phase of treatment needs no elaboration. The only points to be stressed are: First, the advantage of rapidly digitalizing the patient in order to control the ventricular rate as quickly as possible; second, the maintenance of dosage adequate for keeping the rate at 60 to 70 at rest and under 100 during ordinary physical activity; third, avoidance of over-dosage with the attendant danger of ventricular tachycardia or other toxic digitalis rhythm (3).

A certain number of cases of auricular fibrillation may with considerable benefit be converted to normal rhythm. The criterion for selection is the absence of congestive failure. Length of time during which fibrillation has persisted is of no importance. Quinidine is the drug used for this purpose. Digitalis is administered until the ventricular rate is 65 or 70. This is done to counter-act the effect which quinidine exerts of raising the ventricular rate. Then a test dose of 3 grains is given on the day previous to starting the treatment to guard against a possible idiosyncrasy. The symptoms of intolerance are almost identical with those of quinine, its isomer. If the drug is well tolerated it may be given every three hours in 6-grain doses. The patient should be watched for symptoms of intolerance or the manifestation of a toxic rhythm. While untoward results do sometimes occur during quinidine administration, the percentage is no greater than that which occurs in auricular fibrillation without quinidine (4). It is inadvisable, however, to use quinidine unless the heart action can be studied with the electrocardiogram.

If conversion is not affected in seven or eight days, it is useless to continue. Some of the cases converted to normal rhythm revert to fibrillation shortly afterwards; others may retain normal rhythm for considerable periods of time. Small doses of quinidine may help to maintain sinus rhythm.

Alternation

Alternation of the heart is a condition in which the left ventricle, while beating regularly, expels larger and smaller quantities of blood at alternate contractions. It is thought to be due to a variable number of fibers contracting during the systoles. This phenomenon usually accompanies other signs of severe cardiac disease such as Cheyne-Stokes breathing, paroxysmal dyspnoea, angina pectoris, gallop rhythm, etc.

The treatment of advanced cardiac failure could well be the subject of a whole paper and I hope at some later date to have the pleasure of bringing it before you for discussion.

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MENTAL CHANGES IN GENERAL MEDICAL AND SURGICAL DISEASES*

E. T. Ponder, M. D., Little Rock

We all realize that the General Practitioner and Surgeon repeatedly encounter mental factors in their patients that obscure diagnoses and lead to errors in treatment. This is especially true in that the psychoneurosis and other personality changes are produced or aggravated by illness. Too often a physician looks in vain for symptoms seemingly of a physical nature that are actually of mental origin. At times the symptoms are the expression of the incipient onset of a marked mental disorder. The beginning of a mental disorder is the time to treat it rather than at the time of full development.

At this time I wish to quote you some figures that will bring out some astounding facts with which you are perhaps not familiar. In the Mental Hygiene Bulletin, May, 1929, we find the following: Of the 6,852 institutions in the United States in 1928—general, nervous and mental, tuberculosis and other special hospitals—only 553 or approximately 8 per cent were devoted to the care of nervous and mental patients, while the general hospitals comprised 63 per cent of the total number. There were approximately 11 other hospitals to every one institution for nervous and mental disorders, 8 of these being general hospitals. Yet, in contrast to their comparatively

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small number, the institutions for nervous and mental disorders, with a total of 394,000 beds, contained more than 44 per cent of all institution beds. Of the average number of patients in institutions, more than 52 per cent were in institutions for nervous disorders. The number of patients in nervous and mental institutions exceeded that in general hospitals by more than 18 per cent. The increase in the number of patients in nervous and mental institutions in the year 1927-1928 was almost twice that of the patients in general hospitals. The average percentage of beds occupied in nervous and mental hospitals exceeded that in all other types of institutions. One out of every 171 people in the United States during 1928 was a patient in a hospital of some kind. One out of every 325 was a patient in an institution for nervous and mental disorders. A larger proportion than for any other group of institutions. One out of every 500 people was a patient in a general hospital. One out of ever 2,406 people was a patient in a tuberculosis hospital. One out of every 2,726 people was a patient in other special hospitals.

Wadsworth, a Consulting Engineer of New York, has stated, in estimating needs for hospital construction for mental patients for the twenty year period from 1925-1945 based on a probable general population of the United States in 1945 of 143,000,000 people and with the assumption that relative urban percentages of population will remain the same as in 1925, that beds must be provided for an increase of 213,000 mental patients, at a cost of $37,500,000.00 per year.

The National Committee for Mental Hygiene is authority for the prediction that of the children now attending school and college about 960,000 or nearly 1,000,000 will enter a hospital for mental and nervous diseases at some period of their lives, if the present rate for first admissions are maintained.

The U. S. Veterans' Bureau operates 49 hospitals, of which 17 are especially equipped for the care of mental patients. The total number of patients in Veterans' Hospitals on February 28, 1929, was 20,046. Of these 10,968 were mental and nervous patients. On that date, there were also 1,541 neuropsychiatric patients in other government hospitals and 1,193 N. P. patients in contract hospitals. Thus, the total number of veterans suffering with mental and nervous diseases was 13,702. It has been estimated that the neuropsychiatric load will not reach its peak until the year 1947. These various figures apply to patients that have shown such pronounced mental disorders that hospitalization has been effected.

It is perhaps impossible to estimate the additional number of persons that possess mental trends that more or less seriously affect their adaptation to the world, but who have not been hospitalized in institutions for nervous and mental disorders. No class of society is exempt. Mental disorders invade the homes of the rich and the hovels of the poor. It lays its hand on the mentally defective and takes tribute from the intellectual giant.

It may seem from the foregoing that mental diseases are increasing at an alarming rate, but this is hardly true. The seeming increase is the result of several factors:

1. When the World War was raging, soldiers were subjected to a rigid N. P. examination and many cases of mental diseases were uncovered.

2. People are becoming better informed and mental symptoms are are now recognized which heretofore passed unnoticed or were regarded as peculiarities.

3. The viewpoint of mental diseases has changed; formerly it was regarded as a disgrace to both the family and the individual to have a mental disease; now, we realize that a man's mental machinery is as apt to become disordered as his physical.

Before taking up the various changes that occur in disease, perhaps, we should at this time explain something of the development of personality. We all are born with the influence of years of ancestry. We are subject to the influence of our environment. Through the combined influence of heredity and environment, we possess habits of thought and conduct that determine the special characteristics of our personality. A great majority of us do not fight and overcome all obstructions. We are content to follow the line of least resistance. We are prone to drift. We lack initiative and become a slave of habit, and remain in the well-worn rut. It is only the leader that is not content, but pushes on to a successful accomplishment of every task. There are two factors that produce personality changes—organic and non-organic.

Symptoms of disease of the central nervous system may be so vague and obscure that at first they are difficult to diagnose. After a time by elimination and laboratory tests, the true nature of the malady is discovered. The trend of the mental upset will be guided by

the previous mental makeup of the individual. For example, the delusions of an educated man would not be of the same character as the delusions of a negro stevedore.

If our mental makeup is good, excluding organic influences, then we cannot break down seriously or permanently no matter what the conflict may be. Remember that an individual with a stable nervous system does not have breakdowns. All sorts of non-organic factors may operate to break down our power of adaptation. We may inherit poor mental stability or our reactions may be conditions of such circumstances as death, marriage, financial loss, etc. We may through environment be timid, reserved, or may be just the opposite, self-willed and overbearing. Many men who had a breakdown during or following the World War were individuals with unstable nervous systems, the War was only a precipitating factor in bringing the defects to the surface. Probably most of these individuals had they been left in the atmosphere and environment to which they were accustomed would have adapted themselves and been able to make a satisfactory adjustment.

The change in the mode of living and change of habits caused by physical illness may be responsible for a personality change without any other external cause. The individual who has been healthy and led an active life becomes the victim of a disease, say tuberculosis. He is advised by his physician to perhaps change climates, to go to bed, to live the life of an invalid for a while at least, this change in the manner of living, this blasting of hopes and dreams of the future brings a serious crisis to the individual. If he has a poor mental makeup, he will have a bad reaction; he will develop either a psychosis or a psychoneurosis, he will become irritable, grouchy, unreasonable, have a depression; he will become selfish and self-centered. He will, in the event he becomes better, develop a tendency to hide behind his physical weakness and shun responsibility, using as an excuse the fear of precipitating a reactivity. If he is normal mentally, he will face the problem of changed living with a cheerful spirit and fight, determined to win back health and to again take his place in the community. It is extremely common for the psycho-neurotic to develop a train of symptoms that seem to be entirely physical, e. g., they complain of fatigueability, cardiac arrhythmia, gastro-intestinal symptoms, headache, dizziness, lack of interest poor memory, etc. Where a patient has these various symptoms and after a careful, painstaking examination; laboratory, x-ray, etc, and we can find no cause for them, then we should know that they are the manifestation of a mental disorder. When an individual has an unstable mental makeup, it is consoling in the face of difficulties to hide behind some physical ailment, he finds it more consoling to attribute his failure to physical rather than mental illness.

I have seen many female patients in the State Hospital with psychoneurosis who have fooled good surgeons and have had several operations; remember that these patients show improvement after operations, but not for long, the same inherent defect remains and they immediately present a new train of symptoms. Remember you cannot cut out a mental trouble.

In some diseases, the mental symptoms antedate the physical. For instance in Lethargic Encephalitis, we have a gradual personality change; loss of interest; inefficiency; failing memory; then finally the organic neurological changes will appear and the diagnosis is easy. In Paresis, frequently, we have a period of neurasthenia, the true meaning of which is not realized until some frank, psychotic episode becomes manifest; possibly a more careful examination would have led to a correct diagnosis.

A great many people showed personality changes after the flu epidemic of 1918. Influenza is a disease that from its very toxicity is prone to cause marked changes in the nervous system. It changes the brain cells; it is also prostrating and may leave mental residuals such as faulty memory, inability to concentrate, marked fatigueability, loss of attention and various emotional changes. It also produced rather marked functional changes following this epidemic among the soldiers. These men had entered service buoyed up with the patriotic motive of serving their country; they went through the grind of training camps and through actual war overseas at first enthusiastically and willingly, but after the glamor wore off and they had to go through the same routine day after day, the rigors of war and the monotony of camp life, the physical illness offered a means of escape without the danger of their courage and patriotism being questioned. If they could have been discharged then, probably the mental disorder would have disappeared, but then

came the Armistice and innumerable delays and slowness in being discharged and they became irritable, depressed, and morose, and developed personality changes more or less lasting. All of the shell-shock cases belong to the psycho-neurotic group, more often hysteria.

I will relate a case referred to me, showing how physical symptoms completely overshadow all other symptoms, but which in reality was a mental case, pure and simple. This boy, fourteen years of age, was referred to me by another physician. The history obtained was that the present illness started six weeks ago, weakness in left leg and arm, had influenza in December, was sick about a month, recovered, started to school and stopped three weeks ago. This illness came on gradually. He had no headaches, no diplopia or vomiting. There was no history of infantile paralysis in neighborhood. Jerked left arm, was fidgety, moved constantly; had always been healthy. There was a history of paralysis of the left leg. Neurological examination showed no paralysis of any of the cranial nerves; tongue was protruded centrally; pupils were irregular, but reacted to direct light; no tsosis; no nystagmus; no speech defect; abdominal reflexes were active; cremasteric reflexes were present and active. No atrophy of any muscles; patellars were equal, about normal; no ankle clonus; no Babinski; no Romberg. Coordination tests were well performed; no sensory disturbances. This patient had been diagnosed brain tumor. After this examination, his mental makeup was gone into and it was found that he had always been spoiled and petted, especially by his mother, that he had had some difficulty in passing his grades in school, and for this reason the above symptoms became manifest as a means of getting away from the unpleasant situation in school. As to treatment, it is not within the scope of this paper in the limited time allotted me to go into the details of the treatment. Suffice to say that whenever personality changes become apparent, a competent psychiatrist should be called in consultation and he and the physician in charge should treat the case jointly. In the last few years, there has been a new outlook in the field of medicine. Psychiatry used to be set far apart from the field of general medicine, but we are learning that the Internist and the Psychiatrist should work hand in hand to accomplish the best results. Psychoneuroses as a rule can be treated at home and fair results can be obtained, providing we have the co-operation of the family. Patients who are psychotic, disturbed, suicidal or otherwise unmanageable require institutional care. It has long been a blot on the name of our State that the facilities for the treatment of mental and nervous disease patients have been woefully inadequate. The hospital buildings are antiquated and the accommodations are far below present needs. They are veritable fire traps, but I am glad to see a new era dawning in this State and we are now on the verge of building a magnificent State institution for the care of mental and nervous diseases. You have a fellow towns' man who is Chairman of the Board of Construction for the building of this institution. There have been ample means provided to procure revenue for the building of this hospital, however, this appropriation should be supplemented by another one which will carry an appropriation sufficient to secure a competent staff of physicians to treat the mentally afflicted. If this is not done, we will have only taken one-half step forward in this matter.

Abstract

PREVALENCE OF SYPHILIS IN APPARENTLY HEALTHY NEGROES IN MISSISSIPPI

The examination of 7,228 blood specimens from an unselected group of rural Mississippi Negroes above the age of 9 years by complement fixation tests for syphilis showed positive reactions in 19.3 per cent of all males and in 18.0 per cent of all females examined. The rates of infection in the various age groups reach a maximum between the ages of 30 and 39 for both males and females. Paul S. Carley, New York, and O. C. Wenger, Hot Springs National Park, Ark. (Journal A. M. A., June 7, 1930), point out that the positive results probably represent less than the actual amount of syphilis in the group. The infection rates in this unselected group are roughly the same as those discovered at the United States Public Health Venereal Disease Clinic at Hot Springs, Ark., in a selected group who were seeking medical aid for previously diagnosed venereal diseases. These data suggest that, from a public health and economic point of view, syphilis is probably the major public health problem among rural Mississippi Negroes today.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Chiropractic is dying and in some localities is positively dead, according to the *Journal of the Iowa State Medical Society*, published in the State which gave birth to chiropractic. The President of the American Bureau of Chiropractic is reported as having said that it gave him a heart ache "to see the great buildings in Davenport, Iowa, nearly empty and that great school almost without pupils." The commenter then says that it will be only a few years until chiropractic will be recognized only as an historical curiosity. "In the meantime, however, we find that some thirty-six States and the District of Columbia have legalized the practice of chiropractic, illustrative of what may be accomplished by concerted financial support in lobbying, and in lavish advertising."—*The Journal, Indiana State Medical Association.*

Editorial

CARE OF THE PATIENT

The term art of medicine cannot be satisfactorily defined. For the purpose of this discussion we publish an abstract of an article by James D. Heard, Pittsburgh (Journal A.M.A., May 31, 1930), who applies it to that field of medicine in which the care of the patient is governed primarily by the clinical experience, by the insight and intuition of the practitioner. No rigid distinction as between art and science can ever be drawn, for the scientist is constantly employing art in the carrying out of his investigations, whereas art tends to become self-conscious, to formulate rules of conduct, and so to become scientific. To practice art without science constitutes charlatanism. To practice science without art is to disregard the personality of the individual who seeks relief. He asserts that in the acquirement of the art a knowledge of psychology is of first importance; but, as Dr. Edsall has said, wide reading is far better training in psychology than is any merely formal study of the subject. Nevertheless, many physicians who have been expert in their art have received most of their early training as a result of the lessons of adversity. They have reached port after sailing an uncharted sea where they had to depend entirely on their own efforts. To the physician, his patient must always be a psychophysical entity, not a diseased organ or group of organs. In the presence of organic disease, emotional disturbances may be brought about by the disease itself, while emotions in turn may aggravate the disease. Often, because of their lack of any demonstrable disease, sick people are said to have nothing the matter with them. But in these cases social readjustment, lightening an overload of responsibility, judiciously applied psychotherapy and other methods of medical treatment may effect cures. The care of these patients will not be successful unless the entire history is known. Such a history is often difficult to obtain. It is necessary to break down certain natural reticences which may lead a patient to guard his statements or even to misrepresent the facts. The history must be taken by the clinician himself. If the care of the patient is to be successful, he must have confidence in the physician. Yet confidence in the physician will be misplaced unless it is founded on an appreciation of his honesty of purpose, of his adequate knowledge of the

science and of the art of medicine. The possession of these qualifications is readily apprehended. Confidence may be shaken by a tendency on the part of the physician to show impatience, to appear abstracted during the hearing of an ofttold tale or to exhibit untimely levity; by his obvious vacillation of purpose, by gossip about his other patients or by unkind criticism of other physicians. It may be lost as a result of his failure to warn the patient before the infliction of pain, or to prescribe a placebo to the man who has great faith in the value of drugs; by his refusal, or even by his manifest reluctance, to call another physician in consultation. Confidence is not necessarily lost because of an inability to provide a diagnose. The clinician often fails to realize the degree of influence which prognosis may exert. This influence affects the patient favorably or unfavorably in exact proportion to what he believes that the physician thinks. To avoid doing harm, the physician must be always on his guard, nor should he be deceived by the cunningly concealed traps set for him. In arriving at a prognosis, the clinician must be guided, of course, by the past experience of himself and others. He will remember patients who have recovered, although for a time the outcome appeared hopeless. The physician must also bear in mind the fact that errors in diagnosis are frequent. But if the facts are known and it is certain that the outcome of the case must be disappointing, or even disastrous, the problem as to how much the patient may be told must be solved in the light of the physician's knowledge of that patient's personality. In any case, "the physician should commit himself only when he must." Quite independently of an unfavorable prognosis, the physician may injure his patients by exciting fear. Fortunate is the physician who has a cheerful countenance or at least what has been called "a poker face." If patients suspect disease of the circulatory organs, they are peculiarly fearful. Before estimating blood pressure, it is advisable to request the patient not to ask for the results. Usually, he will acquiesce if the reasons for the request are explained to him. Under such conditions, dictation of numerals should be expressed in terms of a code. Operations on neurotic people should be advised only after most careful consideration of all the evidence. To avoid harm, the clinician must realize several facts: That unpleasant symptoms of nervous origin are often referred by the sufferer to concealed organs; that the results of the operative drive are often disastrous; that the removal of supposed infective foci is useless if the harm has already been done; that the fact that a patient is a poor operative risk may be shown only as a result of careful study of the individual; and that, in spite of such study, the after-results may show the final judgment to have been wrong. Hurtful suggestion may be implanted through giving the patient too much information. Many people who are ill are harmed by being placed in hospitals, especially in such as are known to specialize in the treatment of mental diseases, or those with such names as Charity Hospital, Cancer Hospital, Home for Incurables, Home for the Friendless. Sometimes, over-restriction of a patient's activities may be more detrimental than the activities themselves. A little golf, an occasional trip to Europe, a moderate use of tobacco—all these may affect him favorably. Even allowing a patient to sit up in a chair may put him in a more hopeful state of mind. Psycho-analysis, when resorted to, is often best employed by the family physician. The mind of the patient must be diverted from his symptoms, but the physician must do more than amuse. He must supplant harmful emotions by those that are helpful. Through his prognosis and his own apparent cheerfulness, moreover, he must give the patient confidence. He must set an example of high-mindedness and courage. He must be able to accept criticism with equanimity. The physician must realize that the patient desires and requires personal attention; that he desires active treatment and is disappointed when he recieves only diagnosis. The ultimate survival of the private practitioner will depend largely on a realization by the profession of the patient's demand for personal service and that the art of medicine is in its essence completely personal. In conclusion Heard says: The lives of all who enter the practice of medicine will be full of toil and anxiety. We can have no engagements which may not be broken. Our lives can never be wholly our own, but even the busiest of us can escape now and then into secret places. There we can enjoy friends, the sweet fellowship of books, the delight of music, the companionship which a garden gives. With Fra Giovanni we can learn that "no peace lies in the future which is not hidden in the present little instant." We take peace. We know that "the gloom of the world is but a shadow. Behind

it, yet within our reach, is joy. There is radiance and joy in the darkness, could we but see; and to see, we have only to look." We look. Courage and self-reliance become ours, for we discover that in caring for his patient the physician may become as "a hiding place from the wind and a covert from the tempest: as rivers of water in a dry place: as the shadow of a great rock in a weary land."

Abstract

FOURTH OF JULY INJURIES

Robert T. Findlay, New York (Journal A. M. A., June 7, 1930), analyzes fifty-four cases. Thirty-nine of the injuries, or 72.2 per cent, were gunshot wounds from blank cartridges, eight were gunpowder burns, and seven were burns by fireworks. The hand, including the fingers, was injured in thirty-nine cases, or 68 per cent, while other locations were injured in the remaining eighteen, or 32 per cent, of the cases. The other locations included the face, scalp, eye, chin, forearm, arm, shoulder, chest, knee and leg. The total morbidity for the fifty-four cases was 531 days. The lowest number of days was one and the highest fifty-nine, with an average of 9.8 days. The total number of treatments for the fifty-four cases was 318, varying from one to twenty-three per case, with an average of 6.35 treatments. Many different forms of treatment were used in 1928. As a result the following technic was proposed for use during 1929 for cases of gunshot wounds in which the injury or burn was of any appreciable depth: 1. Antitetanic serum, from 800 to 1,500 units, according to age, in all cases, the usual precautions being used (intradermal test). 2. The use of a general anesthetic, whenever possible, otherwise local, for the following procedure: 3. On the first visit of the patient, wide debridement with removal of all powder and other foreign bodies, thorough mechanical irrigation with hot physiologic solution of sodium chloride, application of 7 per cent tincture of iodine, loose packing with gauze packing and moist saline dressings. 4. The recommendation of hot saline soaks every two hours until the possibility of infection has subsided. 5. Frequent redressings with removal of the packing in a day or two. This routine was carried out in 1929 in twenty cases according to the specified indications. None of the 1929 cases resulted in a permanent disability and none of the wounds became infected.

Personal and News Items

Dr. E. J. Munn of El Dorado is taking postgraduate instruction in Chicago.

Dr. E. E. Barlow of Dermott recently visited in Hot Springs and Little Rock.

Dr. Rufus Martin of Warren recently visited in Little Rock.

Dr. T. W. Hardison of Petit Jean Mountain visited in Little Rock last month.

Dr. F. L. Castleberry has moved from Paragould to Jonesboro.

Dr. W. P. Scarlett of Russellville was a recent visitor in Little Rock.

Dr. and Mrs. W. B. Grayson of McGehee recently visited in Paragould and Little Rock.

Dr. and Mrs. G. A. Warren of Black Rock attended the Shrine Convention at Toronto, Canada.

Dr. Paul Mahoney of Little Rock attended the lectures of Dr. Freuwald of Vienna, Austria, at Houston, Texas, last month.

Dr. Janet Miller, Medical Missionary (Foreign Fields) is visiting her brother, Dr. W. H. Miller of Little Rock.

BORN—To Dr. and Mrs. Martin C. Hawkins, Jr., 415½ West 21st Street, Little Rock, May 20, 1930, a son, Martin Cassetty Hawkins, III.

Dr. C. S. Pettus of Little Rock, accompanied by J. J. Pettus, recently visited in Biloxi, Miss. They were guests of Dr. Pettus' sister, Mrs. E. P. Smith.

Dr. Geo. F. Jackson, Medical Director, Pyramid Life Insurance Co., Little Rock, attended the meeting of the Medical Section, American Life Insurance Companies, held in Colorado Springs, Colo.

Dr. C. R. Moon, Little Rock, was named assistant surgeon general of the United Confederate Veterans by Gen. R. A. Sneed of Oklahoma City, National Commander. Dr. Moon attended the reunion at Biloxi, Miss.

Dr. Robert Harris, former chief medical officer of the Veterans' Bureau in Little Rock and later superintendent of the Pulaski

County Hospital, is now attending the Phipps Clinic at Johns Hopkins University, Baltimore.

The Fifty-first Annual Commencement of the University of Arkansas, School of Medicine, was held June 3, in the High School Auditorium, Little Rock. Senator T. H. Caraway delivered the annual address. The degree of Doctor of Medicine was conferred upon twenty-nine graduates of this year's senior class.

The meeting of the Ninth Councilor District of the Arkansas Medical Society was held June 5, with Eureka Springs physicians as hosts. A clinic was held at the Don Sawyer Memorial Hospital. An afternoon meeting was held at the Basin Park Hotel.

Forty physicians and their wives attended a banquet in the evening with Dr. G. E. Gladden of Western Grove, president, as toastmaster.

Officers elected were: Dr. W. H. Poynor, Harrison, president; Dr. W. L. Watkins, Alpena Pass, first vice-president; Dr. J. R. Parker, Eureka Springs, second vice-president; Dr. J. H. Fowler, Harrison, secretary-treasurer.

Harrison was selected the next meeting place in December.

FIRST COUNCILOR DISTRICT AND NORTHEAST ARKANSAS MEDICAL SOCIETY

(Reported by W. M. Majors, Secretary)

The First Councilor District and Northeast Arkansas Medical Society held its spring meeting at Blytheville, April 8, where the Society was entertained by the Mississippi County Medical Society.

About one hundred and fifty doctors and their wives, together with many other guests, were in attendance from the following towns:

Blytheville, Jonesboro, Marked Tree, Keiser, Brookland, Nettleton, Helena, Paragould, Tyronza, Little Rock, Weiner, Luxora, Black Oak, Leachville, Harrisburg, Walcott, Bassett, Manila, Marmaduke, Piggott, Pollard, Walnut Ridge, Smithville, Osceola and Marion, Memphis, Tenn., and Hornersville and Carruthersville, Mo.

The meeting was called to order and presided over by the President, Dr. A. G. Henderson, Jonesboro.

The program was as follows:

Morning Session

Invocation—Rev. Perry Webb, Blytheville.

Address of Welcome—C. M. Harwell, Osceola.

Response to Address of Welcome—Morgan Smith, Little Rock.

"Affections of the Lower Spine"—Willis C. Campbell, Memphis.

"The Influence of General Diseases Upon the Ear, Nose, and Throat"—O. T. Cohne, Jonesboro.

"Epidemic Encephalitis, Its Etiology, Symptoms and Treatment"—Richard C. Bunting, Memphis. Discussion opened by Morgan Smith, Little Rock.

Luncheon was served in the basement of the First Methodist Church, at which time brief addresses were made by Mr. Lemons of Blytheville, who spoke in the interest of the Arkansas Association for Crippled Children. Hon. Peter Deisch of Helena told of some of the very recent accomplishments in the interest of the Arkansas Medical Society, and Dr. Morgan Smith of Little Rock made a very timely talk.

Afternoon Session

President's Address—A. G. Henderson, Jonesboro.

"Illeocolitis"—J. E. McGuire, Piggott. Discussed by L. C. McVay, of Marion and Morgan Smith of Little Rock.

"Acute Intestinal Obstruction, Due to Ascaris Lumbricoides (Round Worms)"—Morton J. Tendler, Memphis. Discussed by Morgan Smith, Little Rock and W. C. Haltom, Jonesboro.

Councilor's Address—W. W. Verser, Harrisburg.

Dr. W. M. Majors, Paragould, was re-elected Secretary and Treasurer.

In selecting a place for the fall, 1930, meeting, Dr. L. H. McDaniel extended an invitation to meet in Tyronza, which was unanimously accepted.

County Societies

ARKANSAS COUNTY

(Reported by E. B. Swindler, Secretary)

The Arkansas County Medical Society met at the Riceland Hotel, Stuttgart, June 10.

Members present: Drennen, Fowler, John, Park, Riley, Neighbors, Swindler and Whitehead. Guest, Clyde Rogers of Little Rock.

The program consisted of the following:

"The Scope of County Health Work" by A. B. Jemison, Director.

"The Duties of the County Health Nurse" by Edith McNeill, County Health Nurse.

"The County of Arkansas From a Sanitary Point of View," by Aubrey Crawford, Sanitary Inspector, Arkansas County.

The next meeting will be held in DeWitt, July 10.

OUACHITA COUNTY

(Reported by R. B. Robins, Sec.)

The Ouachita County Medical Society met in regular monthly session, June 5, 1930, at the Camden Hospital. A banquet was served by the nurses of the hospital.

Present: Word, Rinehart, Early, Powell, Jameson, McGill and Robins of Camden; Hathcock of Locust Bayou; Rushing of Chidester; Kennerly of Bearden; Clemens of Mt. Holly; Sam Thompson, J. S. Thompson, E. C. Partee, Norf Partee, and Sanders of Stephens. Drs. Pickard and Caldwell of Shreveport, Louisiana, were visitors.

The scientific program consisted of a talk on "The Crying Infant" by Dr. M. S. Pickard and an illustrated talk on the "Treatment of Wounds," by Dr. Guy Caldwell.

Abstract

FUNCTION AND FUTURE OF AMERICAN MEDICAL ASSOCIATION IN MEDICAL EDUCATION

Morris Fishbein, Chicago (Journal A. M. A., March 29, 1930), discusses the part the American Medical Association has played in raising the standard of medical education, largely through the labors of its Council on Medical Education. The proper way to reform any industry in need of reformation is from within. No doubt the medical colleges of the United States themselves should have organized a movement toward higher standards, but they did not do so. Once the higher standards are attained through the leadership of the Council, the Association of American Medical Colleges is, no doubt the proper body to maintain them for the future. The colleges must concern themselves largely with their own governments. The medical profession of this country will always be greatly concerned, however, with the type of physician that is to be added to its numbers. Who better than the medical profession can know the advantages and deficiences of medical education? The American Medical Association includes 100,000 of the 125,000 physicians who are in active practice in the United States. Its members constitute for the most part the faculties of the medical colleges in which students are taught, the staffs of the hospitals in which students gain their experience, the clinical organizations which approve or disapprove the results of research. The members of the American Medical Association are greatly concerned with the type of medical practice that is to be established in the United States in the future. Shall the product of ten years of intensive medical education become merely a cog in some vast machine for the care of the sick? Through the Council on Medical Education and Hospitals the American Medical Association proposes, with the co-operation of the colleges, to watch the trend of education in medical schools and to make certain that the young man coming into medicine is of a high type and familiar with the ethics and the principles of practice that should prevail. The Council on Medical Education and Hospitals is concerned as much today as it ever has been with the curriculums of the medical college, with the hospital in which the young man gets an internship, and with the nature of his practice after he graduates. The public must be provided with a sufficient number of men to take care of all the sick all the time at a price that they can afford to pay. The distribution of physicians, their postgraduate education, and their number are problems for the Council. Our States have always insisted on their rights to determine who might practice medicine within their borders. They have insisted on the right of any person to indulge in any profession, except murder and burglary, to which he might consider himself called by divine inspiration or by some quirk of his imagination. Some States still have examining boards for every notion in the field of healing that may be mentioned in the dictionary of cultism and quackery. The scientifically trained product of seven years of medical education submits himself side by side with the untrained product of six weeks in a school of chiropractic or naturopathy. Fishbein has seen examiners who could not answer their own questions, even with the aid of several textbooks. Such a situation is unsound from every possible point of view. Educators and physicians alike are convinced that there should be some system whereby a school of medicine, endowed and maintained by the State or by some community within the State associated with a university, and certified by various educational boards as to its high standard of conduct, should be able to present its candidates for licensure to some proper governmental authority and have them licensed for all States without a further exam-

ination. There must be a minimum standard of education for all who propose to heal the sick. That education once accomplished, let the healer use any system of treatment he will. If the minimum standard is high enough, the back doors that are now open into the practice of medicine will be closed. Multiple boards of examiners are an abomination. Single boards which are compelled to receive all candidates on an equal plane, regardless of the nature and extent of their education, are unsound economically from the public health point of view. Fishbein also discusses laboratores, hospitals, and the relationship existing between the Council and the public through publicity channels. He says: Perhaps the most significant factor in medical relationships in the past decade has been the increasing confidence of the public in scientific medicine and the increasing desire on the part of the medical profession to take the public into its confidence and to secure public support for medical movements. Only by proper publicity for the work of the Council on Medical Education and Hospitals will there be complete support for that work. The Council will then be able to accomplish all of its potentialities in the field of medical care. The Council must make available in the public press in every community its list of approved hospitals, so that the people may not be inveigled into trusting themselves to institutions ethically and scientifically unfit for the care of the sick. The Council must point out to the public the fact that hospital care of the sick is costly and that the people must learn to provide for the inevitable cost of sickness as they provide today for changes of costume with the seasons and for the luxuries of modern life. The Council must educate the people into the differences that exist between institutions built primarily for the study of illness and for medical education and those which are built for the care of all of the sick all of the time.

Book Reviews

International Clinics.—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles. By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume II. Thirty-ninth Series. Published by J. B. Lippincott Company, Philadelphia.

The contents of this volume refers to:

"Diagnosis and Treatment;" "Medicine;" "Pediatrics;" "Surgery;" "Physiology;" "Pharmacy;" "Medical Ethics;" and closes with a chapter on "Medical Questionnaires."

Diseases of the Thyroid Gland—By Arthur E. Hertzler, M. D., Surgeon to the Halstead Hospital. With a chapter on Hospital Management of Goiter Patients by Victor E. Chesky, M. D., Associate Surgeon to Halstead Hospital. Second Edition, Entirely Rewritten. Published by The C. V. Mosby Company, St. Louis, Mo. Price, $7.50.

The author's conclusions of this valuable presentation have been arrived at only after a constant comparison of clinical pictures, the pathology, and a repeated examination of the patient, many of them for more than thirty years. In the ten chapters will be found 159 illustrations.

Clinical Aspects of Venous Pressure—By J. A. E. Eyster, B. Sc., M. D., Professor of Physiology, University of Wisconsin, Associate Physician, Wisconsin General Hospital, Madison, Wisconsin. Published by the MacMillan Company, New York. Price $2.50.

The author of this book stresses the clinical application of venous pressure, in the hope that it will stimulate an interest which can only make for a better recognition, understanding and treatment of cardiac decompensation. Chapter VII describes "Clinical Cases." The general points of interest are included in the Endocarditic group and the Myocardic group.

The Surgical Clinics of North America—(Issued serially, one number every other month.) Volume 9, number 3. (New York Number—June, 1929), 299 pages with 125 illustrations. Per Clinic year (February, 1929 to December, 1929). Paper, $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

Among the 19 contributors to this number of The Surgical Clinics of North America we find an interesting clinic by Dr. Fred Albee of New York on "Application of the Bone-Graft Peg in Ununited Fracture of the Neck of the Femur." He says, "only by precise, automatic, motor-driven tools can the graft peg be given that glass-stopper fit which is demanded by the mechanical and physiologic principles of bone grafting."

Calcium Therapy.—The Fundamental Principle Underlying Rational Therapeutics. By John Aulde, M. D., Formerly Assistant Physician Out-Patient Department, Jefferson Medical College Hospital. Published by John Aulde, M. D., Philadelphia.

This book presents the author's findings on calcium therapy during the past fifteen years. He mentions, in the preface, that "Experience and observation have convinced him of the off-tendency in regard to diet and besides, there seemed to be a pressing necessity for

further studies, so that clinical and scientific facts would dovetail and harmonize." Along with this was the patent fact that the dietary was radically wrong in respect to the morganic principles, which led the author to emphasize and elaborate his views on the subject of magnesium infiltration.

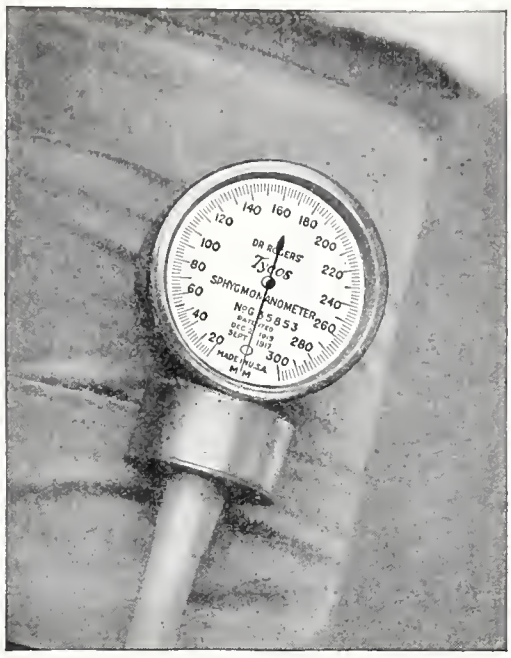
Allergic Diseases, Their Diagnosis and Treatment.—By Ray M. Balyeat, M. D., F. A. C. P., Lecturer on Allergic Diseases in the University of Oklahoma Medical School; Consulting Physician to St. Anthony's Hospital and to the State University Hospital. Illustrated with 87 engravings, including 4 in colors. Third Edition, Revised and Enlarged. Published by F. A. Davis Company, Philadelphia, Pa. Price $5.00 net.

Since the author's first edition much research work on allergic diseases has been done, thereby greatly improved methods are presented on diagnosis and treatment. Dr. Balyeat recognizes the importance of sensitivity as the cause of certain types of eczema and such foods as wheat, eggs, and milk may be important factors in the etilology of many chronic diseases.

The closing chapter presents case reports illustrating the etiology and treatment of eczema, urticaria, abdominal pain, migraine and epilepsy.

Principles and Practice of Electrocardiography—By Carl J. Wiggers, M. D., Professor of Physiology in the School of Medicine of Western Reserve University, Cleveland, Ohio. With 61 illustrations. Puplished by The C. V. Mosby Company, St. Louis, Mo. Price, $7.50.

The author of this book gives his experiences after twelve years conducting practical courses in electrocardiography in the medical schools of Cornell University in New York City and of Western Reserve University in Cleveland. The book is divided into three sections. The first deals with the general principles and procedures of electrocardiography, with the physics of the galvanometer and accessory systems. The second section considers the cause of the normal electrocardiographic deflections and their relation to physical and physiologic processes in the heart. The third section considers a series of abnormal electrocardiograms from patients which are presented as unknowns. It points out the evidences of abnormalities in each, discusses their significance in terms of clinical physiology, and thus arrives at a diagnosis. This is followed by a brief discussion of the salient features of the disorder studied, and of the treatment which has been given the stamp of approval.



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Original Articles

THE LATE TOXEMIAS OF PREGNANCY*

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The term, toxemia, has become widely used to refer to a group of varying conditions occurring in the latter half of pregnancy, involving particularly the kidneys and liver. We mean to convey by this term the underlying supposition that pregnancy occasionally develops toxins which circulate in the blood and if not excreted, cause an intoxication of the organism. These conditions have been aptly termed, "Intoxications of Pregnancy." The orgin of these toxins, if they be present, is as yet as much a mystery as their nature. We do know, however, that if the pregnancy be terminated or that link between baby and mother, the placenta, be destroyed, the toxemia begins to subside. Various authorities have advanced theories on this basis, assuming that the constitution of a perfectly healthy woman can easily meet the added demands of pregnancy, but one who is handicapped by disease succumbs to the added burdens and develops a toxemia. The majority of the extra burden of pregnancy must naturally fall on the organs of excretion and detoxication, the kidneys, liver, etc., and it is these that break under the strain of gestation.

The group of cases which comprise the toxemias can be divided into three or four groups, all of which may terminate in eclampsia. In fact, eclampsia per se, or convulsions, can only be regarded as a symptom which may terminate any of these severe toxemias.

I. CHRONIC NEPHRITIS. The patient has had some damage to her kidneys before pregnancy occurred. This may have been caused by one of the acute exanthamata during childhood, by rheumatism or by some focal infection. The damage to the kidneys may not be marked or it may be severe, depending on the extent of the injury and the duration of the disease. The patient will show albumin in the urine and a moderate hypertension. Many of these patients are elderly multiparae who have had several pregnancies, the nephritis having become more marked with each pregnancy. This is the so-called "low reserve kidney."

When a woman enters pregnancy with damaged kidneys, one of three things can happen. An acute exacerbation of an old nephritis may occur, resulting in an acute nephritis. The kidneys may break down when called on to do the extra work of pregnancy, and develop into pre-eclampsia or eclampsia. The placenta may become so destroyed by infarcts to interfere seriously with the nutrition of the fetus, sometimes causing fetal death. The course of the toxemia here is usually slow, giving sufficient warning during the prenatal period of any impending serious outcome. The albumin in the urine increases slowly. The blood pressure mounts. Some edema of the extremities or the eyelids occurs, gradually becoming more marked with the progress of the condition. Finally the patient develops the subjective symptoms of the pre-eclamptic stage. Should pregnancy continue and the proper treatment not be instituted, eclampsia may occur or the child may die in utero, terminating the labor.

II. ACUTE NEPHRITIS. This condition may occur during pregnancy as well as at any

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

other time of life. Pregnancy not only does not confer any special immunity against this condition, but predisposes the organism to it by the excessive amount of work thrown unto the excretory organs. It may be caused by exposure to cold, septic sore throat, acute tonsilitis, acute fever, or focal infections. Pyelitis often is a precursor of this condition. Due to the sudden onset of the symptoms and the rapid development of this condition into pre-eclampsia and eclampsia, it may often be taken for these conditions. The urine shows albumin, casts, and occasionally blood cells. The blood-pressure mounts. The patient develops edema, headache, and the other symptoms of pre-eclampsia. If the course of the disease continues, the patient may develop convulsions.

III. PRE-ECLAMPSIA is the state of the toxemia just prior to the time the patient develops convulsions. It cannot be given as a definite entity, but it must be considered an advanced stage of any of the toxemias. A patient who has had a chronic nephritis and who develops a toxemia which goes on unchecked will ultimately develop into pre-eclampsia. Then again, a patient with acute nephritis may pass on into this serious stage in a very short and stormy course. The patient develops all the signs, symptoms, and findings of the true eclamptic toxemia. If the disease is not checked or the pregnancy terminated, eclampsia or convulsions develop.

IV. TRUE ECLAMPTIC TOXEMIA usually develops late in pregnancy. There is little warning of the impending condition. In the pre-eclamptic stage the patient develops malaise, lassitude, headache, nausea, vomiting, pain in the epigastrium. She may complain of double vision or bright colored flashes. The blood-pressure mounts rapidly, the diastolic keeping pace with the systolic. The urine shows an increasing amount of albumin, casts, and red and white cells. Just before the convulsions the urine may boil solid. Marked edema may or may not develop. Jaundice may occur if the toxemia is of the hepatic type where the liver is markedly involved. If the course of the disease continues, all of the symptoms become more aggravated and the patient finally develops convulsions. She may have one or many fits which in fatal cases come closer together until the patient finally dies, or they may come at less and less frequent intervals and the patient finally recovers.

TREATMENT. Inasmuch as we do not know the cause of the toxemias, we cannot have a specific form of treatment. It varies with different obstetricians, different schools, and different countries. At the Chicago Lying-in Hospital a combined medical and operative treatment has been adopted and years of experience and results have borne out the wisdom of this. The treatment of the toxemias must therefore be individualized, depending on the patient, the environment and the ability of the accoucheur.

Prophylactic treatment in the form of prenatal care stands out as the greatest contribution in the advancement of the therapy of the toxemias. If we cannot cure a disease, then the proper thing to do is to prevent its occurrence. Regular prenatal examinations carefully done, the recognition of early toxemias, and their proper management, and the radical treatment of pre-eclampsia and eclampsia have borne good results at our clinic.

Every patient is carefully studied when she first registers. A general examination is made to determine any physical impairment. Foci of infection, especially in the teeth, are eliminated wherever possible. The blood-pressure is taken with special emphasis laid on the diastolic reading for this may reveal a latent kidney damage. The urine is studied to reveal an active or latent chronic nephritis. It is here we can isolate the patient who has a chronic nephritis which may develop into pre-eclampsia late in pregnancy. If necessary, the patient may be admitted to the hospital for a day or two for kidney studies. A concentration test and kidney function test may show the extent of the kidney damage. These examinations are best done in conjunction with a medical man who is particularly trained in this field. Often it is decided that the patient's kidneys are so badly damaged by an existing nephritis that there is not a sufficient margin of safety to carry on the pregnancy. Such a patient may better be aborted and if possible, sterilized, particularly if she has a large family and kidneys damaged beyond repair. Many cases are further complicated by serious heart lesions. This cardio-vascular renal group of patients are interesting cases for study by the internist and the accoucheur.

Having decided that the patient is in good health and a fit future mother, she is watched carefully for any signs or symptoms of toxe-

mia. Should she develop a moderate hypertension, a trace of albumin, a slight edema, she is placed on a protein-poor and salt-poor diet. She is advised to rest several hours daily, to take freely of fluids, and to return to the clinic at weekly intervals. Under proper co-operation on the part of the patient, the albumin may rapidly disappear and the blood-pressure decrease or return to the normal. If in spite of this regime the blood-pressure rises, the edema increases and the albumin in the urine remains or increases, the patient should be hospitalized. Here diet, rest, and fluids make up the bulk of the management. If the hypertension is marked, magnesium sulphate is given. We use 2 to 4 cc. of a 50 per cent solution twice a day intramuscularly. The patient may improve after several days or a week and be able to return home to continue her prenatal visits. However, if the symptoms of the toxema continue and become more marked and the patient develops into the stage of pre-eclampsia, we must adopt a more radical procedure.

Pre-eclampsia and eclampsia demand more active treatment and it is here we favor termination of the pregnancy in the most conservative manner available under the particular conditions.

If the patient enters the hospital in the stage of pre-eclampsia, we may observe her for 24 or 48 hours and then if no progress occurs, we may decide on surgical intervention. We are always guided not only by the condition of the patient, but also by the viability of the child. Where the child is certainly viable, the question and the method of the termination of the pregnancy should be guided only by the urgency of the condition in the mother. However, if the baby is not viable, or is at the borderline of viability, we may postpone the decision of emptying the uterus from day to day unless the symptoms become alarming, treating the patient medically; but always remembering that these toxemias may also damage the baby as well as the mother.

We have often waited for the development of the baby to find that it has died in utero as a result of the toxemia in the mother. Babies grow very slowly under these conditions and when delivered may show all the signs of toxemia. Then again while waiting on the viability of the baby there is always the danger of the toxemia causing a premature separation of the placenta. This is a serious condition and may often jeopardize the life of the mother. Abruptio placentae is, indeed, a very common sequela of these toxemias. Furthermore, one never knows when a patient with pre-eclampsia will suddenly develop convulsions, thereby reducing her chances of recovery.

The decision of emptying the uterus then becomes a very delicate one, demanding the utmost of experience and good judgment, and is usually made at the Chicago Lying-in Hospital by the obstetrician in consultation with the internist. The value of a premature or toxic baby must be balanced against the dangers that threaten the mother and the proper course of procedure selected.

The method of emptying the uterus will depend upon: (1) the urgency of the condition; (2) the parity of the patient; (3) the condition of the cervix; (4) the presentation and position of the child; (5) the roominess of the pelvis; (6) the size of the child.

If the patient is a multipara who has had one or more relatively easy labors, we favor the induction of labor from below. Castor oil and quinine and intra-nasal pituitrin may be given if eclampsia is not impending. Intranasal pituitrin suggested by Hofbauer must be used cautiously, but may aid in inducing labor. It is most effective in cases of toxemia. Should this procedure fail, packing the cervix with gauze for 24 hours with or without rupture of the membranes may bring on labor. Occasionally where these measures fail or where there is greater urgency, a Vorhees bag is introduced into the cervix and it may start pains rapidly. Should the patient be a primipara whose toxemia has developed into pre-eclampsia, but whose pelvis is sufficiently roomy for her baby, and where the cervix is easily dilatable, one may resort to the above methods of treatment. However, if her condition is critical and eclampsia imminent, or her pelvic passages only moderately roomy, or if she belongs to that class of patients whom we designate as endocrinopaths, in whom we expect a great amount of dystocia in labor, we may decide that a low cervical cesarean section or laparotrachelotomy under local anesthesia, is after all, the most conservative measure for both mother and baby.

Local anesthesia is an unusually important adjunct to the low cervical cesarean in cases of toxemia. We have found that the local anesthesia not only does not add damage to the kidneys, but stimulates them to a very de-

sirable diuresis. The premature and toxic babies have a much greater chance if delivered by the abdominal route.

During the puerperium the patients are kept on a protein-poor and salt-poor diet. Rest and quiet is insisted upon and magnesium sulphate given for marked hypertension.

The prognosis of the patients who develop a toxemia late in pregnancy varies with the individual condition, the severity of the disease, and the time in pregnancy in which it occurs. Eclampsia attacks primiparae most often. It rarely recurs in successive pregnancies and leaves the patient in good physical condition, although not entirely free of damage as was once thought. The mortality varies from 4.8 per cent in our own clinic to as much as 20 per cent. Over 4,000 women in the United States still die of eclampsia annually. For the patient who has a chronic nephritis, each successive pregnancy usually adds to the damage. The acute nephritis may leave marked or little damage, depending on the extent of the disease and the management of the case.

Abstracts

MEDICAL PROFESSION AND PATERNALISTIC TENDENCIES OF TIMES

William Gerry Morgan, Washington, D. C. (Journal A. M. A., June 28, 1930), discusses the growth, decline and reincarnation of paternalism in government; paternalism in medicine; voluntary sickness insurance; compulsory sickness insurance; State medicine; the public health movement, and non-governmental paternalistic tendencies. He calls attention to these matters with a desire to arouse the individual members of the profession to a sense of responsibility in the concerted effort being made to forestall further encroachments on prerogatives which, by virtue of training and experience, belong to physicians as private citizens, members of an honored and honorable profession, whose duty is to the community they serve in their endeavor to prevent and to cure disease.

PEPTIC ULCER

Arthur Dean Bevan, Chicago (Journal A. M. A., June 28, 1930), concludes his review by stating that the field of peptic ulcer belongs to no one specialty. It belongs to and must be cultivated by many men; the general practitioner who will see first the great majority of the cases, the internist, the surgeon, the roentgenologist and the pathologist. No one group can claim this field exclusively as its own. There can be no just conflict between the internal management and the surgical treatment of these cases. The internist who can see little or no place for a consideration of the surgical treatment in 20 per cent of cases of peptic ulcer has a narrow conception of this field and is a menace to many of his patients. On the other hand, the operating surgeon who does not realize that 80 per cent of cases of peptic ulcer can be cured by good medical management may be a more serious menace to the patients that fall into his hands. The roentgenologist who believes that the diagnosis of peptic ulcer depends on roentgenologic observations alone and who independently desires to make the diagnosis on such evidence without a knowledge of the history and gross clinical picture is working at a great disadvantage. Clearly, this is a field for good team work and in this team there must be a number of workers; the general practitioner the internist who is especially trained in stomach work, the surgeon, the roentgenologist and the pathologist. It is only in a clinic where such team work has been developed that a patient with an ulcer of the stomach can receive the best treatment that modern scientific medicine has to offer. It is only by treating this problem as a piece of scientific research that we can hope to solve it.

TO THE DELINQUENTS

This issue of the JOURNAL is the last you will receive until your dues are paid for 1930.

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GET IT DONE

It isn't the job we intended to do
  Or the labor we've just begun,
That puts us right on the balance sheet,
  It's the work we have really done.

Our credit is built upon things we do,
  Our debit on things we shirk.
The man who totals the biggest plus
  Is the man who completes his work.

Good intentions do not pay our bills,
  It is easy enough to plan,
To wish is the play of an office boy,
  To do is the work of a man.

—*The Kalends.*

Editorials

OUR PRESIDENT

Dr. E. E. Barlow, the new President of the Arkansas Medical Society, is a man whose ripe experience should be of incalculable benefit to him in his new office and to the society he serves. Born in Illinois in 1873, he still is a young man as years are counted these days Graduated twenty-eight years ago and with excellent experience in his internship at Joseph Price Hospital, Philadelphia, followed by a large practice and, during the War, being a member of the Medical Reserve Corps and Chairman of the Medical Advisory Board of Chicot, Desha, and Ashley Counties, chosen because of his medical learning and experience, it will be recognized that few members of the society are better fitted to preside over us for the coming fiscal year. And with the cooperation of the membership a prosperous year should be assured for the Arkansas Medical Society.

Dr. Barlow, after his public school course in his native State, attented the Central Normal College at Danville, Indiana, the Keokuk, Iowa Medical College and graduated at the University of Tennessee in 1902. He began the practice of his profession at Dermott and has lived there ever since, having built up a fine practice and earning the loyal friendship of his community, not only by his professional work, but in his activities in church, welfare and other movements for the benfit of the community. In other words, he is the typical "good citizen" whom his fellow townsmen delight to honor. Dr. Barlow married Miss Nina P. Brian of Memphis in 1906, and they are parents of two sons. He and his family are members of the Presbyterian Church and the doctor also is a capable and earnest bible teacher in the Sunday School. He belongs to the Masonic order, a member of the Dermott Lodge and of Albert Pike Consistory.

Dr. Barlow is a firm believer in the value of medical societies. He belongs not only to the organization he heads, but also is a member of the Southern, American Medical Association, and the American College of Surgeons. Not content to stand still in his profession, believing that there is always something to learn he has kept up with current thought, theories and experiences in the clinics so that with his energy, knowledge and thirst for more knowledge and experience, he is one of the best examples of the modern physician and surgeon.

THE PRESIDENT'S ADDRESS

"The Family Doctor, Today and Tomorrow" was the topic of the address of the retiring President, Dr. Thad Cothern, Jonesboro, to the convention at Fort Smith, he referred to his enthusiasm of twenty years ago when the young practitioner was apt to think he knew all there was to know, then he came down to the present and the many important discoveries in medicine in the past two decades. He noted the difference in medical school training then and now and added that the profession is constantly being re-invigorated by the coming in of new blood, new ideas, new theories, while the older and perhaps less useful appendages are being shelved or dropped off. In this the editor cannot agree with our ex-president. He is himself an illustration of its fallacy, because he has not stood still while the younger men shot ahead. The fact is that many of the very greatest are men of years whose studies, backed by long experience, eminently fit them to be leaders. However, that is merely a matter of opinion.

It is quite time, as Dr. Cothern said that because of the changes adopted the young graduate enters the field with a different perspective, but the experienced practitioner still has the advantage of his experience plus the modern trends which, of course, he must heed. Dr. Cothern especially referred to the comparatively new advent of the specialist. Certainly there always have been specialist, but more particularly in diseases of the visible organs, the eye, nose, ear and throat. But the more recent specialist are to be found in what may be called "The innards" and that suffices to explain and save words. Major operations for diseases of practically all the interior organs have reached a stage never before dreamed of by the older generations of surgeons and these have inevitably brought forth an array of specialists. But by no means do the specialist shelve the family doctor nor do they try to do so. Indeed the family doctor is the best friend of the specialist, the source of most of his patients.

Dr. Cothern also referred to the coming of the psychologist into the medical field. Psychology certainly has its uses. The knowledge, the intimate knowledge of his mental as well as his physical conditions, of his nervous reactions, of sundry idiosyncrasies constitute factors which once never inquired into, now are recognized as largely essential to a full understanding of the case. As quoted by Dr. Cothern, the doctor must know his patient as well as his patient's disease. The address was received most favorably and was listened to with the greatest attention.

Dr. Cothern's Address to the House of Delegates

In his address to the House of Delegates, Dr. Cothern stressed the needs of heading off any attempt to so amend the Basic Science Law as to render its purpose void. That the attempt will be made seems to be almost certain and the cooperation of every member of the Arkansas Medical Society should end in defeating such an amendment. Every member lives where some member of the House or Senate reside and such member should see them and explain in detail just why any amendment would be adverse to the best interests, not only to the regular physicians, but to the protection of public health and welfare.

Dr. Cothern made an excellent suggestion in discussing The Journal which, he said, had reached its present efficiency because of the volume of advertising carried. He urged members to read The Journal, including its advertising pages, send for samples, information and when ordering or writing, mention that they saw the advertisement in The Journal of the Arkansas Medical Society. That is what the Journal has consistently preached for years. The importance of it is plain for if the advertiser gets no response from his advertising he will be very likely to discontinue it.

Dr. Cothern called attention to alleged unethical practice by certain physicians especially as to work under contract to railroad, insurance and other corporations. Recognizing the fact that the physician has a perfect right to sell his services he contended that such contracts must be along ethical lines and he suggested that all such contracts should be submitted to the Council for approval. He urged cooperation by members with the State Board of Health and the health officers throughout the State to encourage a sentiment in favor of Preventive Medicine and Hygienic Living. Adequate financial aid to the School of Medicine, University of Arkansas, by the Legislature, cooperation with the Woman's Auxiliary were stressed and near the close of his address, there was some scoring of the log rolling to satisfy the ambitions of members to hold office instead of obtaining officers best fitted for the work by their qualifications.

Personal and News Items

Mrs. C. W. Garrison of Little Rock was elected Vice-President of the Woman's Auxiliary of the American Medical Association at the Detroit Session, June 23, 1930.

Dr. W. C. Russwurm of Helena was injured June 26th in an automobile accident on the Elaine highway. His condition was reported as very satisfactory.

Dr. C. W. Garrison, State Health Officer and Secretary of the State Board of Health was elected President of the Association of State and Provincial Health Authorities of North and South America, at the annual meeting of that organization in Washington, D. C., June 23, 1930.

The following Little Rock medical officers of the Officers Reserve Corps were ordered to report at Fort Snelling, Minn., for active duty in the 24th Evacuation Hospital, July 6th: Lieut.-Col. Homer Scott, Maj. Pat Murphey, Maj. Wayne Neal Freemyer, Capt. Solomon Fisher Hoge, Capt. Stacy Claibourne Howell, Capt. Joe Herman Sanderlin, Lieut. Joseph Franklin Shuffield, Lieut. Howard Allen Dishongh, Lieut. Morgan Ira Nederhiser, Lieut. Ernest Harl White, Lieut. Byron Alexander Bennett, Lieut. Harry Chester Berry and Capt. Lee Clyde Gammill.

The following Arkansas physicians attended the meeting of the American Medical Association, June 23-27, at Detroit: George B. Alcott, Weiner; F. E. Baker, Stamps, William R. Bathurst, Little Rock; W. R. Brooksher, Jr., Fort Smith; C. K. Caruthers, Pine Bluff; Isaac H. Cunning, Knobel; E. F. Ellis, Fayetteville; Arthur Fowler, Humphrey; David W. Goldstein, Fort Smith; Arthur F. Hoge, Fort Smith; H. M. Kitchens, Waldo; Maurice F. Lautman, Hot Springs; John R. Lynn, Hazen; J. G. Mitchell, El Dorado; Martin V. Russell, El Dorado; J. W. Scales, Pine Bluff; Arthur G. Sullivan, Hot Springs; F. Vinsonhaler, Little Rock; Oran D. Ward. England; Robert P. Woods, Altheimer.

The following is a list of licentiates of the State Medical Examining Board of the Arkansas Medical Society for the May examinations, 1930 (Reported by Sam J. Allbright, Sec'y.): C. D. Antone, Dewey Aday, Estes Allen, Oran W. Chenault, Edward W. Crow, Robt. C. Douthat, Barton W. Dorbandt, Arthur M. Gibbs, Opie R. Holloway, N. C. Henderson, Thos. E. Johnston, Joseph V. Land, Judson Millspaugh, James K. Morrow, Clyde D. Rodgers, Wm. A. Snodgrass, Jr., John Stathakis, Lee B. Word, Geo. F. Blodgett, Geo. B. Moore, Jerry T. Miser, Noel J. Copp, James M. Kolb, Warren S. Riley. License by reciprocity was issued to the following: Thomas C. Moody, William T. Tilly, Abraham M. Goldstandt, Roy F. Baskett, Torrence J. Collier, Frances P. Spinka and Clifton T. Morris.

BASIC SCIENCE LAW APPLIES TO CHIROPRACTORS

Attorney General Rules Applicants Must be Examined

Act No. 147 of the 1929 legislature, known as the Basic Science Law, applies to chiropractors, as well as to other practitioners of the "healing arts or branches thereof," and persons desiring to practice such profession in Arkansas must take an examination in the basic sciences, as provided by the Act, Attorney General Hal L. Norwood held Thursday in an opinion to Dr. L. M. Hill of Little Rock, Secretary of the Arkansas Board of Chiropractic Examiners.

Mr. Norwood also advised in response to an inquiry from Dr. Hill that in his opinion the Basic Science act is not discriminatory and does not conflict with the equal protection clauses of the State and Federal constitutions.

In his request for an interpretation of the law, the secretary of the chiropractic examining board called to the attention of the Attorney General that by Section 18 of the Basic Science law a number of persons practicing the healing arts are excluded from its provisions, and inquired if this section does not discriminate in favor of those that are excluded, and against those that are included. On this point, Dr. Hill cited the case of State of Arkansas against Gallagher, 101 Ark. 593.

Regarding this question, the opinion said:

"There is nothing in the opinion in the case to which you refer to sustain your suggestion that the act is unconstitutional. The court held in that case that a chiropractor did not violate the law which made it an offense to practice medicine without complying with the law.

"Act 147 of 1929 does not use the term 'practice medicine,' but requires a basic science examination of all applying for license to 'practice the healing art of any branch thereof'."

Professions excluded from provisions of the act are dentists, nurses, midwives, optometrists, chiropodists, barbers, cosmeticians and christian scientists which practice within the limits of their respective callings. Neither does the new law apply to those persons who held licenses when the Basic Science act became effective.

The basic sciences described in the act and in which thorough examinations are required, are anatomy, physiology, chemistry, bacteriology and pathology—Ark. Dem., July 10, 1930.

REPORT OF THE

WOMAN'S AUXILIARY

OF THE

Arkansas Medical Society

Held in Fort Smith

May 6, 7, 8, 1930

The Woman's Auxiliary of the Arkansas Medical Society met in executive session Tuesday, May 6th, 12:30 p. m., in the Gold Room of the Ward Hotel, Fort Smith, with sixteen members of the board and chairman of local committees present.

After a most delicious lunch, the President, Mrs. C. G. Hinkle, called the meeting to order.

Roll was called by the Secretary and minutes of preceding executive meeting read and approved.

Mrs. H. H. Smith, President of Sebastian County Auxiliary, reported for the Registration Committee.

The Treasurer, Mrs. B. A. Rhinehart, made reports, both upon the Student Loan Fund and dues from the County Auxiliaries.

It was moved and carried that the names of students who are now deriving benefit from the Student Loan Fund be not made public.

Mrs. Garrison spoke in behalf of the "Memorial Benevolent Fund," explaining the good that could be done with such a fund to indigenous widows.

Mrs. Smith announced a "tea" to be given at the home of Mrs. A. F. Hoge at 4 o'clock and stated that cars would be provided for everyone to go. She also gave a cordial invitation to each member of the Auxiliary to attend the luncheon on Wednesday at the Hardserabble Country Club and the Buffet Supper at the Goldman Hotel Wednesday evening.

There being no further business, the meeting adjourned.

TUESDAY AFTERNOON, May 6th, 1930
2:00 to 4:00

The first general session of the sixth annual convention of the Woman's Auxiliary of the Arkansas Medical Society was held Tuesday afternoon, May 6, 1930, at the Ward Hotel, Fort Smith.

The beautiful gold room of this hotel, with its lovely floral decorations, formed a very pleasing background for the group of interested women who have found in the Auxiliary a new field of interest and friendships and who are resolved to put into it only the best of everything.

Promptly at the appointed hour, the meeting was called to order by the President of the Sebastian County Auxiliary, Mrs. H. H. Smith. Dr. Bacon of the First Christian Church, gave the invocation.

Mrs. Smith, in her address of welcome, made one indeed glad to be the guest of Sebastian County Auxiliary which had left nothing undone for the pleasure and convenience of all. In a very beautiful and sincere manner she conveyed the warm welcome which gave evidence of the lovely spirit of hospitality that lay back of her words.

The President of the Auxiliary, Mrs. C. G. Hinkle, was next presented and in her honor, the assembly arose.

The meeting was now turned over to Mrs. Hinkle, who in a few well-chosen words, assured the organization of her love and appreciation of the trust which had been hers the past year.

Mrs. C. T. Drennen, in her usual charming manner, gave the response to the address of welcome.

Dr. Fletcher brought a message, at this time, from the Arkansas Medical Society.

The minutes of all executive board meetings were read by the Secretary and approved.

Mrs. C. E. Oates, chairman of the Committee for Selection and Buying Pins for Presidents of the State Organization, was called upon to report, at the close of which she asked that all past presidents with the president presiding at this time, come forward. In a very impressive manner she then presented the pins to them, and Mrs. C. W. Garrison, in behalf of the honorees, thanked Mrs. Oates and the Auxiliary for them. Those present and receiving pins were: Mrs. C. W. Garrison, Mrs. C. T. Drennen, Mrs T. G. Porter, Mrs. C. G. Hinkle.

There being no further business at this time, the meeting adjourned.

SECOND BUSINESS MEETING, May 7th 10:00 A. M—Ward Hotel

The second business session of the Woman's Auxiliary of the Arkansas Medical Society was held in the Gold Room of the Ward Hotel the morning of May 7th.

The morning session was opened with a prayer by Mrs. T. G. Porter.

The following reports from officers and chairmen were read and adopted:

Secretary, Mrs. O. J. T. Johnston, Batesville.

Treasurer, Mrs. B. A. Rhinehart, Little Rock.

Organization, Mrs. W. R. Brooksher, Jr., Fort Smith.

Finance, Mrs. Dewell Gann, Sr., Benton.

Publicity, Mrs. G. D. Murphy, El Dorado.

Public Relations, Mrs. L. T. Evans, Batesville

Hygeia, Mrs. R. H. T. Mann, Texarkana.

Student Loan Fund, Mrs. T. G. Porter, Hazen.

Historian, Mrs. C. W. Garrison, Little Rock.

Constitution and By-Laws, Mrs. Grayson Tarkington, Hot Springs.

Program, Mrs. C. T. Drennen, Hot Springs.

Resolutions, Mrs. P. E. Phillips, Ashdown.

Reports of County Auxiliaries next followed, there being eight Auxiliaries responding with splendid reports.

A very interesting report of the meeting of the National Auxiliary at Portland, Ore., last July, was given by Mrs. C. W. Garrison, who acted as delegate.

Mrs. D. A. Rhinehart reported the meeting of the Auxiliary to the Southern Medical Association.

Mrs. A. A. Blair, chairman of registration, reported 84 delegates and visitors had registered up to this time.

Report of Nominating Committee was heard. The President appointed as tellers Mrs. W. R. Bathurst, Mrs. I. N. McCollum and Mrs. H. H. Hare, and the election proceeded by ballot.

Officers elected for the coming year were as follows:

President—Mrs. C. E. Oates, Little Rock.

President-Elect—Mrs. W. R. Brooksher, Jr., Fort Smith.

Vice-President—Mrs. P. E. Phillips, Ashdown.

Publicity Secretary—Mrs. Marcus T. Smith, Conway.

Treasurer—Mrs. E. L. Beck, Texarkana.

Parliamentarian—Mrs. W. V. Laws, Hot Springs.

Historian—Mrs. C. W. Garrison, Little Rock.

Directors for One Year—Mrs. J. C. Cunningham, Little Rock; Mrs. Grayson Tarkington, Hot Springs.

Directors for Two Years—Mrs. C. T. Drennen, Hot Springs; Mrs. E. E. Barlow, Dermott.

There being no new business to bring up at this time, the meeting adjourned.

Visitors and delegates to the sixth annual convention of the Woman's Auxiliary of the Arkansas Medical Society were guests Wednesday, May 7th, at an elaborately appointed luncheon at the Hardscrabble Country Club.

A profusion of roses, shasta daisies and sweet peas were used in decoration. Corsages for the guests marked the places.

Seated at the honor table were all presidents of the organization with the officers of the Auxiliary, and chairmen of local committees.

Other guests were served at small tables.

Mrs. W. R. Broksher, Jr., was toastmistress of the special luncheon program.

Mrs. C. W. Garrison delivered the invocation.

Mrs. Dewell Gann, Sr., of Benton, who was not present when pins were presented the State presidents, was, at this time, presented by Mrs. Oates with her pin. Mrs. Gann re-

ceived the pin with thanks, stating that she appreciated the thought that prompted the gift.

Mrs. Brooksher introduced the President, Mrs. Hinkle, who delivered the President's address.

The new President, Mrs. C. E. Oates, was now presented and gave a short but interesting talk upon the lines of work to be carried on the coming year.

Mrs. J. B. Crawford of Little Rock presented Mrs. Oates with the pin of the President's—a gift from her own Auxiliary.

This completed the formal numbers. Supplementing the official courtesies were musical numbers by Mrs. Eugene Stevenson and Mrs. H. H. Smith.

Too much praise cannot be given the members of Sebastian County Auxiliary for the many courtesies and kindnesses extended by them. The sixth annual meeting of the organization will long be remembered as one unusually marked by a spirit of good will and fellowship, much of which is due the gracious spirit of hospitality that was shown on every side.

Among the affairs of social interest connected with the meeting of the Woman's Auxiliary of the Arkansas Medical Society was an afternoon tea at which members of the Sebastian County Auxiliary entertained in courtesy to delegates and visitors to the sixth annual session of the organization. The party was given at the home of Mrs. Arthur Hoge.

The presence of the entire staff of State executives added a note of interest. They, with the past presidents, and Mrs. H. H. Smith, President of Sebastian County Auxiliary, and Mrs. Hoge, received the guests. In the receiving line were Mrs. C. G. Hinkle of Batesville, president; Mrs. C. E. Oates, Little Rock, President-Elect; Mrs. W. R. Brooksher, Jr., Fort Smith, Vice-President; Mrs. O. J. T. Johnston, Batesville, Secretary; Mrs. B. A. Rhinehart, Little Rock, Treasurer; Mrs. W. V. Laws, Hot Springs, Parliamentarian; Mrs. C. W. Garrison, Little Rock, Historian and Past President. In addition to these were the past presidents of the society, Mrs. Dewell Gann, Benton; Mrs. C. T. Drennen, Hot Springs, and Mrs. T. G. Porter, Hazen, and Mrs. H. H. Smith, President of Sebastian County Auxiliary, and Mrs. Hoge.

Presiding at the beautifully appointed tea table were the honorary members of the hostess Auxiliary, Mrs. Herbert Moulton and Mrs. J. G. Eberle. Members of the Auxiliary assisted.

On the spacious lawn youthful entertainers were presented in various interpretations of the dance and added much to the enjoyment of the afternoon, which passed all too quickly for the happy guests.

(Report of the Memorial Session will be found on Page 46.)

Obituary

STOUT, LUTHER HINTON—Dr. Luther H. Stout of Brinkley died June 29, 1930. Aged 40. He was graduated from the St. Louis College of Pharmacy, St. Louis, and the College of Medicine of the University of Tennessee, Memphis. During the World War he served as a captain in the Medical Department, and held a commission in the Officers' Reserve Corps at the time of his death. Locating in Brinkley at the close of the war, he established a large practice in that section.

He is survived by his wife, who before her marriage was Miss Kathleen Flora of Brinkley, one son, Jack, his father of Forrest City, and two brothers, Thomas Stout of Forrest City and Fred Stout of Scott, Miss.

BARLOW, MARTIN JOHNSTON—Dr. M. J. Barlow of North Little Rock died July 1, 1930. Aged 56.

Dr. Barlow received his M. D. Degree at Vanderbilt University in 1904. He began practicing medicine at Beebe and moved to North Little Rock in 1906. He was married in 1898 to Miss Minnie Boyce of Dardanelle, who survives him. He is also survived by two sons, Jack Barlow, Atlanta, Ga., and Ralph Barlow, a medical student at Washington University, St. Louis; two daughters, Mrs. B. A. Guenter, Park Hill, and Mrs. S. W. Murtishaw, Monroe, La.

He was a member of the Southern Medical Association, the Pulaski County Medical Society and Arkansas Medical Society, and was on the staff of St. Vincent's Infirmary, Baptist State Hospital and the Children's Hospital.

E. E. BARLOW, M. D., F. A. C. S.
Dermott
President Arkansas Medical Society, 1930-1931

PROCEEDINGS

OF THE

FIFTY-FIFTH ANNUAL SESSION

OF THE

Arkansas Medical Society

FORT SMITH, MAY 6, 7, 8, 1930

HOUSE OF DELEGATES.

First Meeting—Tuesday Morning, May 6.

The House of Delegates convened in the convention hall of the Knights of Columbus building, and was called to order at 9:30 a. m. by the President, Dr. Thad Cothern.

The Secretary: The attendance cards of the delegates show we have a quorum present and I move we accept these credentials as the roll call of the House for the first meeting. Carried.

The President: On the Credentials Committee I will appoint H. T. Smith, J. M. Proctor and R. C. Dorr.

The Credentials Committee made its report as follows:

The Committee on Credentials report that they have examined the credentials of all the delegates who have so far registered and find that their papers are in good form and correct.

H. T. SMITH,
J. M. PROCTOR,
R. C. DORR,
Committee.

On motion, the report was accepted and the committee discharged.

On motion, duly seconded and carried, the minutes of the Fifty-fourth Annual meeting as published in July, 1929, issue of the Journal, were approved as printed.

The President: On the Reference Committee I will appoint W. H. Mock, W. A. Snodgrass and W. M. Majors.

Vice President Fletcher: It is my pleasure to present your President, Dr. Thad Cothern, who will deliver his annual address to the House of Delegates.

Mr. Chairman and Members of the House of Delegates:

The Basic Science Bill, and the activities necessary to secure its passage, are past history except for the spirit of cooperation of the profession of our State, which we believe holds on as firmly and as actively as during the time it was so manifest during the last session of the General Assembly.

We wish to call attention to the fight that we will have at the next session of our Legislature to keep this Bill from being so amended as to render its purpose void.

The act has been initiated whereby our State Society employs an attorney to look after its various needs, such as seeing that our medical laws are enforced, and that such legislation as affects our Society is either secured or rejected as its purpose justifies. Let us urge that this activity be continued as our Board of Councilors directs.

The advertisements carried by the Journal of the Arkansas Medical Society make it possible for us to have the efficient Journal we now have. Let us urge you to read them and to write for further information, samples, etc., and don't forget to say I saw your advertisement in the Journal of the Arkansas Medical Society.

Now a word about the Commercial Exhibits at this meeting. The sums paid for floor space by the various firms having an exhibit lessens the financial burden of the Sebastian County Medical Society in its entertainment of our State Society. Please visit the different booths and assume an interest anyway, to cause those in charge to feel that their money was "well spent."

At our session last year at Hot Springs the Council saw fit to revoke the charter of the Logan County Society because of the unethical conduct of some of its members. Unfortunately, this membership so dominated the Society that they could not be expelled from the Society, so the charter was revoked.

This same element has been active in Sebastian County and in Fort Smith, as evidenced by the organization and activities of the People's Hospital. Those of you who are not already cognizant of the facts will hear them during this meeting, and let us urge you, by all means, to sustain the recommendations of your Council.

Another matter I mention and ask that it be given some consideration. In many parts of our State some very unprofessional or unethical practices are carried on relative to some railroad and insuance work. We all know that a corporation has the right and privilege to employ medical

services, and that a doctor has the privilege of so selling his services. This is a matter that should be and can be adjusted upon an equitable basis, which would not work a hardship upon any of the other physicians in the locality concerned. In our opinion, copies of any such contracts should be filed with the Council of our State Society, or censors of the County Society concerned, so that the relations of the profession in the vicinity as a whole could the better be looked after.

I might here state that during the past several months I have written the officers of the various County Societies asking them for a list of their members who did any work of this type. In my files quite a mass of data has accumulated, and from it I see the need of the recommendations I have just made.

The County Society, where I hold my membership, has unanimously passed a resolution voicing its desire for a State General Hospital, and for adequate financial help from the State for our Medical School. Let us urge that you, here and at home, use your influence to secure such action from the next session of the General Assembly.

Let us urge you to cooperate with our State Board of Health, and with the Health officers of the various communities of the State to see that a sentiment favorable to Preventive Medicine and Hygienic Living is aroused. It is my belief that we should encourage more hygienic training in our schools and various social and civil activities, which have to do with the training of our children and young people.

Let us urge you to encourage the Woman's Auxiliary in its undertakings and activities, for it is the good wife to whom the busy doctor has to look for guidance, comfort and sometimes for support.

Last, but not least, I approach a topic which has been discussed by many members of our Society, and on which I think the House of Delegates should ever hold in mind. "Brutus was an honorable man, yet Brutus was ambitious." Some few members of our Society are very ambitious to fill some of the honored positions, which our organization has to offer. They even go to the point of initiating campaigns to have themselves elected to these positions. It is the duty of the House of Delegates to sit down on any such member and also on those who urge and abet them on, for as I see it, these honors should be given as a reward of merit and not because of successful wire pulling, log rolling and such like.

It has been my good fortune to be the Standard Bearer, when virtually we had nowhere to go. Through a long acquaintance and work with my successor, I feel that I know him well enough to unreservedly commend him to your confidence as a leader. I ask that you give him the loyal support which you gave to my predecessor, Dr. Mann, and to myself. We know that you will find Dr. Barlow "on the bridge" when a navigator is required.

President Cothern: We will now hear the reports of the standing committees.

SCIENTIFIC PROGRAM

R. J. Calcote, Chairman

The report of the Program Committee has already been placed in your hands. The committee feels that this is an excellent program and hope you will enjoy every minute of it. I would like to emphasize a few of the high-lights on this program. This afternoon we will have Dr. Edward Davis of Chicago, with a paper on "Late Toxemias of Pregnancy." This paper will be illustrated by a three-reel moving picture film showing some of the work being done at the Chicago Lying-in Hospital. Dr. Davis is associated with Dr. DeLee of Chicago, and I am sure you will all enjoy his paper. We also have following Dr. Davis, Dr. Lewis J. Moorman of Oklahoma City. He is professor of medicine at Oklahoma University, and will give us an excellent paper on "Tuberculosis." Tonight, following the President's address and welcoming addresses, we will have Dr. R. F. Lischer of Mascoutah, Ill. He will also address us again tomorrow morning at 10 o'clock; on both occasions on non-scientific subjects. We have been told that if you miss hearing Dr. Lischer you will miss one of the best parts of our program. Tomorrow afternoon we will have Dr. Edward H. Skinner of Kansas City. Dr. Skinner is a radiologist and needs no introduction, I am sure, to most of the members of the Arkansas Medical Society. Thursday morning we will have Dr. Ernest Sachs of St. Louis, who will give us an excellent paper on "Spinal Cord Tumors." In addition to this, we have two films from the Eastman Kodak Company, one on the "Technique of Blood Transfusion" and the other on "Infections of the Hand." These films have come to us highly recommended. They have been shown at some of the largest meetings in this country and have been well received. Also in addition to this, we will have tonight following the papers and addresses a film on cancer, through which runs a little story, and tomorrow afternoon we will also have the Canti-film on Cancer. This comes to us highly recommended. We have received such reports on it that we have decided to also run it tonight after the other film, for those who care to see it. It is said it will bear repetition at this meeting. Dr. Skinner, of Kansas City, is thoroughly familiar with this film and has agreed to explain the film tonight.

I want to take this occasion to thank the other members of the committee, Dr. Smith of McGehee, Dr. Fletcher of Hot Springs, Dr. Goldstein of Fort Smith and Dr. Bathurst for their very hearty cooperation and help in making up this program. (Applause.)

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Chairman

We have arranged a scientific exhibit of something like eleven exhibits, I think. I have lost track of them. We had a couple come in on the last day. A very interesting exhibit that I would like to call your attention to is the exhibit of the Bureau of Mines, U. S. Department of Commerce, which has on display all the apparatus used in mine rescue work, together with a mine rescue truck itself. They have a very interesting mechanical demonstration showing the Shaefer method of artificial resuscitation, which is almost lifelike. We have another interesting exhibit from the Arkansas State Board of Health showing model dairies, model country homes, model sanitary privies and things of that kind; and in addition to that several series of chart exhibits from different organizations throughout the country. We have two scientific exhibits proper, one of them on the Avulsion of the Phrenic Nerve by Dr. Krock of Fort Smith. I think you will all

enjoy the exhibits. It has been a pleasure to work them up for you and we would like to have as good an attendance as possible.

MEDICAL LEGISLATION

M. L. Norwood, Chairman

The Legislative Committee for its report says that no session of the Legislature has been held since its last annual report and it has therefore performed no duties deserving report. It is, however, considering and studying the matter of improved educational facilities for the youth of our State, a question that has interested this Society for several years. If it is decided to make this an objective of the Society, this committee urges all of our members to cooperate by speaking to their Representatives and Senator on the subject. This harmony of effort is essential to success.

REPORT OF THE LEGAL ADVISER

Hon. Peter A. Deisch, Helena

Once again we meet in annual session, not for the purpose of reviewing the past and exulting over the accomplishments, or excusing the failures, but rather to counsel together and determine how we may in the future, through the inspiration of united effort, more successfully and effectively perform the duties which are our particular responsibility.

For the first time in 19 years, and the fourth time in its history, the Society meets today for this, its fifty-fifth annual session, in a city where the opportunities for good conduct are so many and so overwhelming, and the temptations for a deviation therefrom are so few and negligent, as to have induced large numbers of the ladies to have permitted their husbands to journey here alone. The attendance here today, one of the largest in your history, I am told, demonstrates the value of a good name for a city as well as for individuals.

The question of contract practice was discussed to some extent at the last session, but it has assumed a much greater importance since then. Since your last meeting a determined effort to obtain practice in a large measure, by personal solicitation of the public, has been and is being made by men of large financial means. On May 9, 1929, a corporation was formed in this State with the avowed purpose of securing patients by a wholesale solicitation of the public. In the course of one year, they wrote nearly 3,800 certificates or policies.

The corporation had as its stockholders laymen, and it employed salesmen who solicited the public at large, very much like life insurance agents. Their certificates provided that for a payment of two dollars a month, it would furnish medical, surgical and hospital services to the certificate-holder, his wife and minor children. The corporation then contracted with certain doctors who owned a hospital and equipment and these were then used to treat the patients secured by the corporation.

You are familiar with the fact that there is a wide difference between practice of this nature, and accepting employment from railroads or other businesses engaged in a hazardous occupation, for your ethics permit the acceptance of such employment, while your constitution definitely prohibits the acceptance of employment of you by any organization which solicits business.

The Gantt Act prohibits the employment by a physician of a solicitor to obtain patients for him, but in the case which we are considering the corporation solicited the patients and employed the physicians to treat their patrons. A suit was filed by your counsel in association with local attorneys provided by the county society, in the name of the State of Arkansas, having as its object the annulling and vacating of the corporate charter of the offending organization.

The theory of this lawsuit was that the State in authorizing the formation of corporations for "any lawful business purpose" did not mean to include the work of the learned professions; that the word "business" had a distinctly different meaning from the practice of a profession, and that if the Legislature had meant to include the work of the learned professions, that it would have so stated in specific language. Our proof amply bore out the allegations of our complaint, that is, we proved that the corporation was practicing medicine through agents and employees, and the court sustained our viewpoint of the law, and directed the jury to return a verdict annulling the corporate franchise of the corporation.

After the judgment of the court was rendered, the corporation employed additional and distinguished counsel, and decided not to appeal the case to the Supreme Court, but to proceed along other lines. They are now sending to their former certificate-holders a letter stating that certain members of the former corporation have formed a voluntary organization to cooperatively employ physicians for their practice, and inviting the recipients to sign the enclosed contract. This presents an entirely different question, but owing to its importance it will have the earnest and careful consideration of your counsel.

The court which tried the instant case was impressed with the theory which we advanced, that the practice of a learned profession should not be operated as a business enterprise, with the dominant idea being that the greater the number of patients the greater the profits; that mass production should not become the paramount idea with professional viewpoint, as fitness of character is apt to be lost sight of when the sole object of the practice is to make money. This principle appealed to the court trying the instant case, and will undoubtedly again appeal in the same manner when the question in a different form is again presented.

That this form of practice is an ever-increasing menace to the continued well-being of the public, as well as improvement of the profession, was amply proved by our investigation. We found in many instances that the most superficial attention was given to those requiring treatment, and the death rate in the hospital conducted by them was appallingly high.

The responsibility of wisely and rightly ascertaining and enforcing the rules of the game, and fitting your successors to carry on your work, is a public service of the first magnitude. I know of no other that outranks it. To recognize it distinctly as a public service is highly important, because by so doing we meet and dispose of the contention that standards of fitness should be relaxed to accommodate the infirmities of worthy but untrained men. We are too intelligent to do this in the case of pilots, or railway engineers, or baseball umpires, or guides for the forest, or for snow-capped mountains. The young man must qualify for public service. We do not sacrifice the public interest by good-naturedly giving him a license and turning him

loose. This seems obvious; but we have all heard arguments in justification of inadequate medical training, which, if applied to the Navy, would have made limitation of armaments long ago unnecessary—because every ship by this time would be upon the rocks.

The Society was incorporated during the past year so that there might be a frank discussion in the editorial columns of the Journal of legislative or other controversial topics without personal responsibility.

You are invited to call upon me for legal opinions concerning your work, a number of which I have furnished to the members during the past year.

No work that I have ever had has given me greater pleasure than serving you, and I hope it has been for our mutual benefit. I feel honored to be thus associated with you.

Dr. Cothern: We wish to call the attention of the Reference Committee to the recommendations of Senator Deisch and also that of Dr. Norwood pertaining to medical legislation.

COMMITTEE ON PUBLICITY

Read by S. B. Hinkle

Mr. President:

We, your Committee on Publicity, beg to submit the following report:

It has been our aim to adhere to the principles and precepts as formulated in the report made and accepted at our last regular meeting. We have found this imposes no undue restriction and yet permits rather generous dissemination of educational data.

The various societies have as a whole not pressed the educational factor of publicity as the committee would desire. Some have carried on in a most excellent manner and these we wish to congratulate and encourage. The Hot Springs Medical Society of Garland County is doing fine work along this line. The Pulaski Society has also done some good work in putting over Diphtheria Immunization of school children.

We also commend the Arkansas Tuberculosis Association for the excellent work that they have done in distributing educational knowledge in a public way to the people of our State.

The Cancer Control Committee has distributed 50,000 educational pamphlets over the State in keeping with the plans of our Publicity Committee. If there are other instances of educational work coming under the head of publicity, we wish to commend it, and in closing may we suggest that the society assembled encourage this line of education of the public in pursuance with the aims of the publicity section of our society. It has been a pleasure to the committee to serve in such capacity.

Sincerely yours,

S. F. HOGE, Chairman.
J. T. PALMER, Pine Bluff.
THOMAS DOUGLASS, Ozark.
O. H. KING, Hot Springs.
W. P. COOKSEY, Magnolia.

CANCER CONTROL

Dewell Gann, Jr., Chairman

Mr. President and Gentlemen of the House of Delegates:

Your Committee on Cancer Control respectfully submits the following report:

During the past year this committee, in connection with the State Committee of the American Society for the Control of Cancer, has carried the message of cancer control to practically all professional and lay people in the State of Arkansas. This has been accomplished in many ways. Many interested physicians have assisted us in holding cancer meetings in county seats where free advice has been given to cancer patients at their request and cancer literature has been circulated to the lay people. Many scientific sessions in county medical societies have been held and the cancer situation in general has been discussed on many different occasions. The radio has been used when possible and the press has assisted us in publishing articles concerning the early recognition and its importance in the treatment of cancer. In this work we have had complete co-operation of the State Board of Health under the direction of Dr. C. W. Garrison and the State Tuberculosis Association under the direction of Miss Erle Chambers, for which we are very grateful. While our work has been continuous throughout the year, an intensive cancer campaign was carried on for an entire week last fall and a cancer clinic was held during Fair Week at the State Fair under the personal supervision of Dr. S. F. Hoge, Secretary of the State Committee of the American Society for the Control of Cancer. Many people visited this booth and literature was widely circulated. The cancer clinics in the local hospitals in Little Rock have been continued and free advice and treatment has been given to the worthy poor. Our organization plans have been continued. The State has been arbitrarily divided into districts. In each district a district supervisor has been appointed and we now have functioning in more than half of the counties of the State a County Cancer Control Committee.

Other than our educational work we have very little to offer. Cancer remains a clinical entity the cause of which has not been discovered. The hereditary problem remains questionable and its transmissibility has been accomplished in lower animals only.

It is insidious in its onset, painless in its incipiency and local in its early stages, when curable if properly treated. In its early recognition lies the hope of cure. Surgery, radium and X-ray are the most efficient measures in its treatment. The work being carried on in London and California that has recently received widespread newspaper publicity remains experimental.

Recommendations:

(1) It is recommended that this committee continue its educational program.

(2) That the Society contribute $250.00 annually to help defray its expenses.

(3) That every member of the Society consider himself a committee of one and lend his assistance to this work.

Signed:

DEWELL GANN, JR.,
Little Rock, Chairman.
J. C. HUGHES, Hoxie.
DON SMITH, Hope.
EARLE HUNT, Clarksville.
J. S. WILSON, Monticello.

Dr. Cothern: The question of the appropriation will be referred to the Council.

STUDENT LOAN FUND
E. F. Ellis, Chairman

The Committee on Student Loan Fund has no new loans to report. Of the one thousand dollars allotted to this fund, a loan of $750.00 was made, on which interest and payments are being made promptly. The financial statement is included in the Secretary's report.

Respectfully,

E. F. ELLIS, Chairman.
G. A. WARREN
MORGAN SMITH
R. H. T. MANN
WM. R. BATHURST

Dr. Ellis: Personally, I would like to see this fund continued or added to.

The Chairman: As this carries a matter of appropriation, this report will be referred to the Council.

ARRANGEMENTS
J. A. Foltz, Chairman

Mr. President and Delegates: There remains very little for me to say. Arrangements for your entertainment, your amusement and your education have been as nearly as possible completed in all respects. As to whether or not those arrangements meet with your approval and turn out as we earnestly hope they will, remains to be seen. As to how much you are welcome here, as to how glad we are to have you with us, will be told you by a real orator tonight. The place of meeting, the different items on the program, both relative to the scientific part and the entertainments that have been planned for your amusement and your entertainment have been clearly and correctly set forth in the program which has been prepared by your State Secretary. All of the scientific sessions will be held at the Knights of Columbus Convention Hall. The memorial session. as you see in your program, will be held at the First Presbyterian Church tomorrow morning. A dance, card game and general all-round good time, wherein you may wine and dine and make "whoopee," have been arranged for you by the Entertainment Committee and as you know, will take place at the Goldman Hotel tomorrow from 7 p. m. until 4 a. m. The other things that will happen to you we wish to keep in secret but we hope that when it is all over you will have been pleased and that we will have been able to amuse and entertain and instruct you.

It has been a pleasure to work with the various committees that have brought this about. There has been very little work for me to do because the committees have done it all. I would be ungrateful if I didn't take this opportunity of thanking the committee for their 100 per cent cooperation and for their whole-hearted and enthusiastic work that has made possible the completion of these arrangements.

We again want to say that we hope that you will have a good time, that you will have a good meeting and that we may see you again in the near future. I thank you. (Applause.)

JAS. A. FOLTZ.

REPORT OF THE COUNCIL
Dewell Gann, Sr., Chairman

Your Council hasn't had enough business to come up during the year to justify us in undergoing the expense of holding a midwinter session. Therefore, we had no meeting. We will give our annual report the last day of the meeting.

REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS
S. J. Allbright, Chairman

This Board has held three meetings since the last meeting of the Arkansas Medical Society. The regular semi-annual examinations in May and November, and a reorganization meeting in June.

At the meeting for reorganization in June, W. A. Montgomery of Atkins was elected President, W. W. Verser of Harrisburg, Vice-President and Sam J. Allbright of Searcy, Secretary and Treasurer.

At this meeting much time was given to discussion of the "Basic Science Law' which had just become effective. It was the expressed opinion of the majority of the Board that this law did not effect the issuance of license by reciprocity when the applicant came from a State which did not require less of its applicants than this Board, however, it was voted that the Secretary should write Hon. Peter Deisch for an opinion. In his reply Mr. Deisch suggested the Secretary should write to the Attorney General's office for an opinion in order that something definite might be had to act upon. A letter from the Attorney General's office said, "It is my opinion that Act No. 147 of 1929 which creates the Basic Science Board applies only to those persons wishing to take the examination, and does not in any way effect your reciprocal agreements." Acting upon this opinion, the Board has continued to issue license by reciprocity when the credentials of the applicants are satisfactory.

The Board has refused the application for license by reciprocity of some eight or ten this year because their qualifications were not up to our standards. Certificates have been issued by reciprocity to thirteen applicants since June, 1929, coming from Louisiana, Missouri, Tennessee, Georgia, Virginia, District of Columbia, Oklahoma, Ohio, Michigan and Illinois. Twenty-seven applicants have been certified to other States for reciprocity, going to Louisiana, Texas, Oklahoma, Ohio, Arizona, Missouri, California, New Mexico, Alabama, Georgia and Illinois. Insofar as the Secretary is informed, license was issued on each of these applications, except the one to Illinois, which was refused on technical grounds. The applicants coming to us from Illinois have not been accepted until both the State Board and A. M. A. have verified their graduation and license—this because of some reported sale of license and diplomas in Illinois.

Only one applicant appeared for examination in November. He made a satisfactory grade and a license was issued to him.

The Board is of the opinion that our May meeting is too early and would be better for all concerned if it were held later, say in June. This would give opportunity for graduates to receive diplomas before appearing for examination.

This Board would not at this time make any statement as to what effect the Basic Science Law will have upon medical practice in our State, as it has not been in effect long enough. It has

been rather difficult to get information in regard to how it is acting in other States.

There are several physicians practicing in Arkansas without license and on forged licenses. The Secretary has had much assistance from the Narcotic Department and from the Directory Department A. M. A. in finding this out, but it is a slow process and with such a handicap as no official register of licensed physicians in Arkansas, it is going to be next to impossible to overcome. It is the opinion of the Secretary that an annual registration of all practitioners will be necessary before it can be remedied; twenty-one States have such annual registrations.

The income of the Board this year, since June, 1929, has not been sufficient for running expenses. Each member of the Board has made two trips to Little Rock and will make another next week, and has not even drawn expense money. The Secretary is of the opinion this is because of the Basic Science Law and will probably be better in a few years after matters have had time to adjust themselves and about the time the present Board members have given place to other members.

REPORT OF THE DELEGATES TO THE A. M. A.

We wish to refer our readers to the abstract of the proceedings of the House of Delegates published in the September, 1929, issue of the Journal.

REPORT OF THE SECRETARY

Mr. President, Members of the House of Delegates:

The Arkansas Medical Society ended the year 1929 with 1,193 members. This is forty-five more than the previous year.

Several were dropped from our roll for nonpayment of dues, deaths, removed from the State, and other causes. A number of new members were enrolled.

THE JOURNAL:

During the past year we not only published the entire proceedings of the annual meeting, with 28 original articles, but gave 20 abstracts of some of the most important papers printed in other Journals, with other items that totaled 238 pages of reading matter. From the advertising section, I collected $4,476.94. This amount exceeds any previous report.

The money on hand for the Gorgas Memorial now amounts to $213.36. This is a separate fund and not included in my financial statement.

Being the first one to present the advantages of a Basic Science Board to our Society, I wish to include in my report a few words in its favor. I mention this because a few of our members have, on account of misinformation, given out some very damaging statements. In an editorial of the Journal of the American Medical Association, dated April 26, 1930, it says "Basic science boards have now been established in seven States, all of which have multiple licensing boards. Their object is to provide one educational standard which can be applied alike to all those seeking authority to practice the healing art. The establishment of such boards is a logical step and, as shown in the statistics published this week, they are giving evidence of real service not only in checking the illegal practice of the cultists but also in eliminating a few incompetents from those applying as physicians.

Our Financial Statement Shows:

Cash on hand at close of last session			$ 9,771.50
Received for interest:			
Secretary's account	$ 38.02		
Journal's account	108.52		
Treasurer's account	85.72		
Student Loan account	41.60	$ 273.86	
Received on principal Student Loan Fund		130.00	
Received from Journal advertising		4,476.94	
Received for dues since last meeting		5,339.75	$10,220.55
			$19,992.05
Expense:			
Current		$7,203.26	
Legal		732.65	$ 7,935.91
Cash on hand			$12,056.14
Notes receivable Student Loan Fund			590.00
			$12,646.14

I wish to thank the officers, both of the State and County Societies for the many courtesies that have been extended me. I confidently believe that the coming year will present even greater progress for the medical profession of Arkansas.

Respectfully submitted,

WM. R. BATHURST.

REPORT OF THE TREASURER

Report of Treasurer of Arkansas Medical Society for the year ending May 6, 1930—meeting at Fort Smith, Arkansas.

My records show the following:

Balance on hand at annual meeting May 7, 1929		$ 2,024.26
Receipts for the year:		
July 2, 1929, received from Secretary	$7,747.25	
Interest on savings account	85.72	
Interest on Student Loan Fund	41.60	
Payments on principal Student Loan Fund	130.00	
Total receipts during year	8,004.57	8,004.57
Total funds available during year		10,028.83
Disbursements:		
Vouchers No. 307 to 328 inclusive		7,935.91
Balance on hand May 5, 1930		2,092.92

Respectfully submitted,

R. J. CALCOTE, Treasurer.

The Chairman: The reports of the Secretary and Treasurer will be referred to the Council.

(Reports of the Committees on Infant Welfare, A. C. Kirby, chairman, and Hospitals, J. W. Walker, chairman, were passed as the chairmen were not present.)

The Chairman: Is there anything under the head of New Business?

The Secretary: Nothing on my desk.

Dr. R. H. T. Mann: There is one thing I want to bring up and that is the reciprocity relationship existing between the boards in other States with reference to the Basic Science Law. What I mean is this: If a member of the medical profession from Louisiana is permitted to reciprocate after having stood an examination in Louisiana with the State of Arkansas and evade complying with the Basic Science Law. That is very good for us, but what about a chiropractic who has been licensed in Tennessee and has reciprocal relations in the State of Arkansas, who comes to Arkansas, enters the State by a reciprocal license? In other words, you get a ruling from the Attorney General which permits one board to reciprocate by passing around the Basic Science Law, what would under similar circumstances prevent other legalized boards in the State from doing the same thing. Isn't that right? If one school of medicine evades the Basic Science Law by reciprocity, every other school can do the same thing.

Dr. S. J. Allbright: This seems to be a question that is disturbing the different States in which the Basic Science Law has become effective. In Nebraska, where the law has been in effect longer than in any other State, the Board has made practically the same ruling we have made. I do not know what the interpretation is in Nebraska in regard to Chiropractors, or other cults, but graduates of a Class A medical school who come up to the standards as established by the Board are granted license by reciprocity even though the State from which they come does not have a Basic Science Board.

I am not sure as to the ruling in the other States but think it is the same in Minnesota. In Wisconsin they have a composite Board and they are not entirely satisfied with the Basic Science Law as it is there.

Our Board is the State Medical Board of the ARKANSAS MEDICAL SOCIETY. We are your Board and we want to do what the Society wants us to do. We discussed this question at length and decided to seek the advice of an attorney. He advised an opinion from the Attorney General. It was imperative that we do something as there were on the Secretary's desk seven or eight applications for license by reciprocity at the time the law became effective and we could not wait until this meeting or some other meeting of the State Society to make a decision. We do not want to do anything that will lower the standard of the medical profession in Arkansas. The work of this Board is being recognized and we want it to be recognized and we are anxious that reciprocity be carried out without disturbance. We do not want to do anything contrary to what the Society had in mind when it sponsored the Basic Science Law. What we want is an interpretation of this law that will protect the people of the State from incompetent medical men and at the same time not disturb reciprocal relations in so far as competent men are concerned. That is what we think we have in our opinion from the Attorney General.

I do not know what attitude should be taken in regard to reciprocity among cults. I do not know how many States have chiropractic boards but I think there are more now than there were a few years ago. I learn from press reports the chiropractic schools are practically empty. They are not turning out any more. However, that will not make any difference in Arkansas for several years to come as the chiro board licensed all of them in this State the day before the Basic Science Law became effective.

There have always been cults and I suppose there always will be. I suppose if the chiros do go out of business there will be some other cult to take its place.

Before the Basic Science Board yesterday in Little Rock there were 82 applicants—Seniors, Juniors and Sophomores—all from the University of Arkansas School of Medicine except two or three, one an Osteopath from Texas. They will all, with few exceptions, take our Board as soon as they are eligible. The Basic Science Board had one applicant in November, a graduate of Jefferson. He made a good grade and took our examination and received license.

Dr. L. J. Kosminsky: I just want to bring this thought to the House of Delegates that in Texarkana we live on the State line, whereby we have members of our profession that belong to the Arkansas Medical Society and some to the Texas. The medical profession knows no State line. A majority of the men in the medical profession in good standing belong to both the Arkansas and the Texas Medical Societies. An unfortunate condition exists this year, that they both meet on the same days and dates, and we from Texarkana sincerely hope that before the next year's meeting the two secretaries from the two States get into communication with one another so that we can have a larger delegation from Texarkana, because we are with the Arkansas Medical Society a hundred per cent, as well as the members are with the Texas Society a hundred per cent. And I sincerely trust that you will give us that consideration next year. (Applause.)

The selection of the Nominating Committee being in order, the following were chosen:

PERSONNEL OF NOMINATING COMMITTEE

First Councilor District—W. M. Majors, Paragould.

Second Councilor District—S. J. Allbright, Searcy.

Third Councilor District—T. G. Porter, Hazen.

Fourth Councilor District—H. T. Smith, McGehee.

Fifth Councilor District—J. B. Jameson, Camden.

Sixth Councilor District—L. J. Kosminsky, Texarkana.

Seventh Councilor District—George B. Fletcher, Hot Springs.

Eighth Councilor District—M. E. McCaskill, Little Rock.

Ninth Councilor District—J. G. Gladden, Western Grove.

Tenth Councilor District—W. H. Mock, Prairie Grove.

The proposed change in the Constitution and By-Laws, which was laid over from the last meeting, came up for adoption, being as follows:

"Resolved, That the Constitution and By-Laws be amended raising the annual dues from three to five dollars.

"Therefore, the following change be made in Article XI, fifth line, to read: "The sum of $5.00 per capita per annum.'"

Dr. Kosminsky: I move that the section be so amended.

Dr. Proctor: I second it.

Carried.

On motion, the House of Delegates adjourned.

HOUSE OF DELEGATES.

Last Day.

Thursday, May 8, 1930.

The House of Delegates was called to order by the President, Dr. Cothern, at 1:30 p. m., there being a quorum present according to the attendance cards.

The report of the Nominating Committee was the first order of business.

We, the Nominating Committee, wish to make the following report:

For President: John M. Proctor, Hot Springs; P. H. Phillips, Ashdown; D. A. Rhinehart, Little Rock.

First Vice-President: Will H. Mock, Prairie Grove.

Second Vice-President: H. B. Hardy, Greenbrier.

Third Vice-President: J. B. Ellis, Helena.

Treasurer: R. J. Calcote, Little Rock.

Secretary: Wm. R. Bathurst, Little Rock.

Councilors.

Second District—L. T. Evans, Batesville.

Fourth District—H. T. Smith, McGehee.

Sixth District—C. A. Archer, DeQueen.

Eighth District—M. E. McCaskill, Little Rock.

Tenth District—S. J. Wolfermann, Fort Smith.

Delegate to the A. M. A.—E. F. Ellis, Fayetteville.

Thereupon, the Chairman appointed Drs. W. R. Brooksher, Jr., Pat Murphey and Fred Hayes tellers, and the House of Delegates proceeded to ballot upon the three names selected by the Nominating Committee, Drs. J. M. Proctor, P. H. Phillips and D. A. Rhinehart, for the office of President-Elect.

Upon the first ballot, Dr. D. A. Rhinehart of Little Rock received a majority of all votes cast, and he was declared elected.

Dr. Proctor: May I ask that the election of Dr. Rhinehart be declared unanimous.

Carried on being seconded, by a standing vote.

Dr. Rhinehart was escorted to the platform admist loud applause.

Dr. Rhinehart: Gentlemen—I have been so touched by your vote that it would be impossible for me to make a speech. I have perhaps experienced three outstanding occasions in my lifetime. The first possibly when I was born; the second when my wife said "yes," and the third just now. I assure you that I appreciate more than I can tell this vote and I assure you that I shall spend the energy, time and whatever money is necessary to make my administration one of the best that we have ever experienced in this medical society. From the bottom of my heart I thank you. (Applause.)

The Chairman: A motion is in order that we elect the balance of the nominees by the Secretary casting the vote of the Society.

Carried, on motion duly made and seconded.

The Secretary: It is with pleasure that I cast the vote of the Society for all the officers except the Secretary.

The Chairman: I will declare him elected.

The chairman called for the reports of the two committees unreported, on Infant Welfare and Hospitals, but no reports were forthcoming.

REPORT OF THE COUNCIL

Dewell Gann, Sr., Chairman

Before my secretary reads the final report of the Council, I want to thank the doctors, hotels and the citizens of Fort Smith for the many courtesies shown us during our visit with you and should I live to see Benton large enough to entertain the Arkansas Medical Society as you have entertained us I will invite you to come to Benton, the center of the State, with five railroads.

If any of you should get hold of any bad jake, with the guidance of one of your citizens, the Solomon of the Ozarks, we hope to have a place prepared for you.

(Tuesday, May 6th, 1930—12:00 Noon)

The Council met today at noon.

Present: All Councilors except Doctors John, Lowe, Purifoy and Archer.

(Also Present) President Cothern
Secretary Bathurst
Attorney Deisch
President-Elect Barlow, Lemons, and Morgan Smith, guest.

Chairman Gann presided.

Reports were made by the Councilors present.

Dr. Verser reported the First District doing good work.

Dr. Evans, of the Second District, reported not much work done by him this year. Izard, Fulton and Sharp Counties still unorganized.

Dr. Lemons reported that Councilor Lowe, who was absent, had no report for the Fourth District.

Dr. Gann reported the Seventh District in flourishing condition.

Dr. Watkins' district, the Eighth, is in good condition, with a loss of 50 members.

Dr. Poynor, of the Ninth District, reported most of the counties are in the hilly country and thinly populated. Reports two men practicing without licenses—but can get no relief from the prosecuting officers.

Dr. Wolfermann, of the Tenth District, reported that they still have the question of the Smith Brothers' Hospital confronting them—but reports the district in good condition, especially the Sebastian County Medical Society.

Doctors Wolfermann, Verser and Evans were appointed as the Auditing Committee.

On motion, the Council appropriated $100.00 for the use of the committee, for cancer.

On motion, $300.00 was given to the Sebastian County Medical Society.

The sum of $300.00 was appropriated for the renewal of subscription to "Hygeia."

Hon. Peter Deisch was retained as Attorney of the Society for another year, on the same terms as last year.

The Student Loan Fund was discontinued—and the committee discharged.

(Wednesday May 7th, 1930—12:00 Noon)

The Council met, pursuant to adjournment.

Present: All Councilors except John and Lowe. (Also Present): The same gentlemen as at the previous meeting, except Dr. Morgan Smith.

The President and Secretary were empowered to instruct the Attorney, Mr. Deisch, as to what work he is to do along the line of legal action.

The Secretary was empowered to pay all expenses incident to the present annual convention —and all expenses of the Councilors, in their visits in their districts, during the past year.

(Thursday, May 8th, 1930—12:00 Noon)

The Council met, pursuant to adjournment.

Present: Same as at previous meetings.

The Auditing Committee reported that it had examined the books of the Secretary and Treasurer and found them correctly kept—and all funds accounted for.

Dr. Bathurst was allowed the usual honorarium

The Council adjourned, sine die.

S. J. Wolfermann, Secretary.

Dr. W. A. Snodgrass: I move that the report of the Council be approved.

Carried, on being seconded.

Dr. Cothern: Any unfinished business? Any new business? If not, the House of Delegates will adjourn *sine die.*

GENERAL SESSION.

The General Session was called to order at 7:30 o'clock p. m., Tuesday, May 6, 1930, by Dr. Cothern, Chairman.

Invocation by Rev. Dana Dawson, Fort Smith.

Almighty and Eternal Love, whom Jesus in His great wisdom has taught us to call our Father, we bow before Thee in supplication and with gratitude in our hearts.

We thank Thee for this day and for the many tokens of thy love and favor. We bless Thee for everything life has brought us. For our country, the land of the free and the home of the brave; for the gift of thy Son for our homes, schools and churches, for these men and their profession and for all Thy loving kindness and Thy tender mercy, we praise and magnify Thy glorious Name!

We thank Thee for these men who have dedicated their lives to the service of humanity. May they go about doing good. May they be not unworthy representatives of the Christ who came not to be ministered unto but to minister.

We thank Thee for all the hospitals and the institutions of mercy and of healing. We pray that upon them benedictions may fall of beauty, grace and strength. We pray that Thou wouldst inspire the physician's brain and guide the surgeon's hand. May the doctor, the scientist, the scholar and minister labor together for the establishment of Thy Kingdom. Help us to realize that the realm of truth is one, ruled by the God of truth! We thank Thee, our Father, for these men who, if they cannot heal as Jesus healed, can heal as Thou hast made it possible for them to heal.

We pray, O God, an uncommon blessing to rest upon this convention. We pray especially for those who bring addresses from time to time. May they radiate life, hopefulness and knowledge! We pray that their coming may be a benediction to our city. We pray for all who are near and dear to their hearts. Bless their homes while they are absent; protect, guide and keep in the hollow of Thy hand their loved ones.

We pray that Thou wouldst bring each of us to the end of Life's journey with shining faces, with pure hearts and with consciences void of offense toward God or man. These blessings, with the forgiveness of our sins, we ask in that Name that is above every name. Amen!

ADDRESS OF WELCOME FOR FORT SMITH

By Mr. George Carney, President Chamber of Commerce

Mr. Chairman, Ladies and Gentlemen: I thought that those were stories about what the surgeon sometimes cannot find after an operation. Imagine my surprise this morning when I picked up a paper and saw a story that ran like this: A passerby was walking down the street and he noticed a steam shovel tearing up a street which had only been worked on a short time before, and he said to one of the workmen, "What are you doing here, tearing up this street again?" The workman replied, "Yes. Our contractor was an old surgeon and can't find two or three steam shovels."

I am thankful that I am living in an age where these human ailments and frailties are not only scientifically diagnosed but scientifically treated. I am glad that our medical schools and medical colleges have made their requirements harder and the requirements for time so much longer that only the young fellows with a good backbone and head on top of it can see the course through. Our medical quacks are getting fewer every year and if we can get our State Board of Examiners to be a little bit more severe in every State we are going to have this question of doctors pretty well ironed out. (Applause.)

I want to digress from what a speech or address of welcome is expected to be and ought to be and express a few opinions in one sentence or thought that I have and I think it is proper to mention them in front of medical men, and this is the first opportunity I have had of talking to a bunch of doctors. I am basing these two or three opinions on this primary fact that the rights of all the people or the State, as we call it, are prior to the rights of any one individual. Therefore, I am a strong advocate of birth control. I also think that the plea of insanity ought to be barred as a defense in first degree murder. (Applause.) And I also believe as a third thing that the introduction of alienists' testimony either ought to be barred or introduced by the State. (Applause.) Now, those three things I believe in.

Fort Smith this year will have entertained before the year closes some sixty odd conventions. Last week it was our pleasure to entertain the State Federation of Musical Clubs. I had the pleasure of speaking briefly to them and I was very glad to extend to them the greeting from Fort Smith. I made this statement that I didn't think that any individual or any community was a well-rounded individual or community that didn't have some music in their soul and in their system and I believe that for that reason Fort Smith was glad to number among its conventions this year the State Federation of Musical Clubs.

Now, I am very glad that following this I have the pleasure of extending to the medical fraternity of this State a welcome to Fort Smith because I do feel that in a gathering such as we have here tonight we have a class of men who are devoted to their calling, spending a lot of years in preparing themselves and are sincere in their work, and we in Fort Smith are mighty glad of this opportunity to welcome you. I understand that the Mayor has given each one of you a small key, symbolical of the open door of our city, and to this I just want to add in behalf of the business men, as president of our Chamber of Commerce, that we are mighty glad that you are here. We hope it won't remain quite so damp as it is tonight during your stay and that you will have a very pleasant and profitable meeting while here. I thank you. (Applause.)

ADDRESS OF WELCOME FOR THE SEBASTIAN COUNTY MEDICAL SOCIETY

J. H. Buckley, President

President Cothern, Ladies and Gentlemen:

My preacher friend told me that he would look you over and then decide whether he would pray three minutes or one-half hour. He prayed two and one-half minutes. You have pious faces. If he knew some of you doctors as I know you he would, on bended knees, agonize until after the midnight hour. I feel in duty bound to tell you why I was elected president of the Sebastian County Medical Society. A friend of mine who is beastly frank, asked me if I knew why I was selected for president. I told him surely, that the State Society was to meet in Fort Smith and naturally our society wished that a representative member be our president, so I was of course elected. He said you are much mistaken. We knew that there would be much work to be done; we knew that you were too lazy to work, so we made you president. But, my friends, being president carried with it the privilege as well as the duty of appointing all committees, and I want to take this opportunity to thank my different committees for their most loyal support of me and my administration. My general chairman, Dr. Jas. A. Foltz, has asked me to express here his appreciation of the 100 per cent cooperation of all committees with him.

I have a committee for everything (voices in the audience). Have you a golf committee? There are golf bugs in the crowd.

Who is the stranger, mother dear?
Oh, look, he knows us. Ain't he queer?
Darling don't look so wild.
He is your father, child.
My father? No such thing.
My father died away last spring.
Your father never died, you little chub;
Your father simply joined a golf club.
The club has closed, so he
Has no place to go, you see,
Since he has no place to roam,
He decided to return home.
Kiss him; he won't bite you, child.
All those golf guys look wild.

I remember attending a meeting in Texarkana a few years ago and the people of Southern Arkansas know how to entertain, and may I please say to you from the southern part of the State, welcome. Just a few years ago we met in El Dorado. Edgar Allen Poe wrote several verses on El Dorado and asked "Where is El Dorado?" If any of you see Edgar Allan tell him I said that El Dorado is in the eastern part of Arkansas and that the people of the eastern part of Arkansas also know how to entertain, and may I please say to you from the eastern part of the State, welcome?

And Little Rock, that city of roses, that young giant of a city, that city Dr. Bathurst, that by its pull and push, and by the energy and cooperation of its citizenship will, in my opinion, be a city of two hundred thousand souls within a very few years. And may I say to you from the central

part of the State, welcome? You remember, of course, when the State Society met in Fayetteville, the Athens of Arkansas, the city builded upon seven hills, when the gentleman wrote:

"I cannot tell what makes me pine
For those native hills of mine
Nor why the water clearer gleams
Down those mountain streams;
Nor why the earth, the sky and the air
Seems fairer there than anywhere.
It must be by nature's law
They all belong to Arkansas."

Surely Dr. Walker must have been seated upon one of those hills when he wrote that. And may I say to you from the northern part of the State, welcome? Dr. Drennen, last year we met in your city, Hot Springs, the City of Vapors. How I love to visit your city and secure a room in the rear of one of your hotels, where I can look out upon those miniature mountains, whose shoulders are covered with the magnificent oaks and the tall, graceful and slender pines, and where the air is resonant with the warbled harmony of hundreds of soft, sweet-voiced birds as they render their daily sweetest of musicales.

Then I love to walk out upon your main street, Central Avenue, with its beautiful and graceful curves, made possible by the shapely foothills. I love to look at your voluptuous Bath House Row and your wonderful promenade steaded upon the outside and canopied above by those magnolia trees.

I have visited your city during the season when the magnolia grandiflora like white stars did glow in the firmament of green. And may I say to you from Hot Springs and that vicinity, welcome? And to you visitors who are not members of our society from the north, from the east, from the west and from the south, welcome, and when you have returned to your respective homes may you think kindly of us, and in the years to come may you see with your eyes of memory a happy, enjoyable and profitable Fort Smith Convention.

May this memory ever be as of a sweet and fragrant odor of the fellowship existing between you and Sebastian County Medical Society. Once more a hale, a hearty, a wholesome welcome.

RESPONSE TO THE ADDRESSES OF WELCOME ON BEHALF OF THE ARKANSAS MEDICAL SOCIETY

Morgan Smith, Little Rock

When Fort Smith was selected for the meeting place of the fifty-fifth annual session of the Arkansas Medical Society, our hearts began to pant for the time when we could lay aside for a few days routine professional duties and assemble here in concord and fraternity in this the "Queen City of the Northwest"—"The Gateway City to the shimmering Ozarks and the ever-changing beauties of the Ouachitas," and as your Chamber of Commerce aptly puts it, "The City with the Right Combination." That propitious moment has at last arrived, and from every point of the compass we hail, and in numbers unsurpassed by any past meeting.

The fine sentiments of hospitality expressed by Mr. Carney, representing the Fort Smith Chamber of Commerce, and of Dr. Buckley speaking on behalf of the Sebastian County Medical Society, need no bolstering or corroboration. On many past occasions you have been our most gracious host, and I recall that on those occasions so prodigal were you of your social devices and resources for our entertainment and pleasure that, notwithstanding the individual and collective capacities of our members is notorious, for enjoyment, they were put to a severe test.

We knew far in advance of this meeting that you would unconditionally throw wide open your hearts and homes to us, and how well you have fit the action to the word is represented by this magic key with which you have invested us, a key which unlocks your choicest treasure houses. And as further evidence of your interest in our welfare while in your city, I am informed that this self-same key is an exact replica of one that hangs in the office of your Chief of Police. So to those of our members who might, in the wee sma' hours of the night unconsciously stray into the city's hospitable bastile, I would remind them to keep in mind the Latin adjuration, **verbum sat sapienti**, a free translation of which in understandable English is, "Don't lose your key."

Fifty-one years ago the third annual session of this Society was held in this city when the Sebastian County Medical Society had but six members. Dr. R. H. T. Mann delivered the welcome address and it rang true to your reputation for unbounded hospitality. Whenever this Society meets within your borders, you strengthen our attachment to you by your unmatchable spirit of brotherhood and fraternity, and on this occasion, it seems to us, that you have by far exceeded all past provisions for our pleasure and entertainment. While we are gentlemen of large capacity for enjoyment, it is doubtful if we can do more than superficially scratch the surface of your preparations for our pleasure.

The transactions of the third annual meeting of this Society held here indicate the religious seriousness with which the members went about their work. Then there was little or nothing known of the cause of such common diseases as malaria, typhoid fever, yellow fever, puerperal sepsis, diphtheria, scarlet fever and tuberculosis. Pasteur had not yet announced his theory of fermentation nor had Lord Lister yet come upon the aseptic scene. It was not until many years later that Koch announced the discovery of the tubercle bacillus as the cause of tuberculosis. When and how to amputate, how to diagnose and set fractures were big questions in surgery, and the treatment of diseases was by intensive and heroic drugging and blood-letting.

At intervals of a few years we have been coming back to Fort Smith to hold our annual sessions, and the transactions of each meeting reflect the advancement and glory of medicine. Now we approach a discussion of the diseases just mentioned with scientific accuracy, as well as a sort of pardonable nonchalance. Twelve or fifteen diseases of world-wide distribution could be effaced from the face of the earth if the knowledge which we now have accumulated with reference to their cause could be translated into effective measures of prevention. That glorious day is fast approaching and this Society working in conjunction with hundreds of similar organizations is contributing its share toward the consummation of one of the world's greatest hopes—the freedom of mankind from disease.

Fifty-one years ago Fort Smith was one of the most unique cities in the United States, and every page of the booklet prepared by your Chamber, descriptive of the pioneers and their struggles to build a city in keeping with their spirit and virtues and tradition, reads like a "first-prize" ro-

mance. Then you were known as the "Border City," the "Gateway to the Great Northwest," and some have playfully and lovingly characterized your city as the "Get-a-way." But a careful study of the life-history of Judge Parker would indicate that the last appellation was a misnomer and that criminal justice was invariably administered in his court. You had your Main Street and your Babbits, but they have been transformed into Garrison Avenues, and men of big business with progressive ideas have supplanted the Babbits. Your city may have lost its quainness of the early fifties, but you have not lost the indomitable spirit and virtues of your pioneers. In "dreamless sleep" your pioneers have long been enshrouded, may you keep the memory of their heroic lives eternally fresh!

The Sebastian County Medical Society has made many contributions to the progress of organized medicine in Arkansas, and some of the most outstanding Presidents have come from Fort Smith.

The fifth President of this Society was Dr. E. R. DuVal, of Fort Smith and no more scholarly gentleman ever graced this Society than he. His annual address sounds like the "Sermon on the Mount." We all recall the presidency of another of your distinguished citizens, Dr. E. G. Eberle. Who can ever forget his distinguished appearance his courtly manner, his soft word and his consistent adherence to the interests of the profession which he so greatly honored? In 1915 you gave us the twenty-sixth president in the recently deceased Dr. St. Cloud Cooper. Unobtrusive in manner, firm in his convictions, devoted always to his society and its ethical standards, his leadership was safe and the wisdom of his conduct never questioned. Until Dr. H. Moulton, the last President you gave us, does something to justify some specific remarks in his behalf (and may that time be so remote that the youngest of us will have become very, very old), I shall not refer to his virtues, though many; nor to his ability, though generally recognized; nor to his contributions to medical advancement, though admitted by all. To these departed brethren and friends we pay our homage and congratulate the Sebastian County Society upon the enrichment which their lives brought to it.

Fort Smith has given to Arkansas another citizen-physician to whom we wish to pay our respects. Though not a member of the school of medicine to which we subscribe, he is an honor to the profession of medicine and this Society would have Dr. E. H. Stephenson know how genuinely it appreciates the unselfish service he has rendered to the cause of medical education and medical licensure.

As the Census returns have not yet been published, I am assuming that we are meeting in a city with more than forty thousand population. The mileage of your streets would indicate a much larger population. You have, according to your Chamber of Commerce more churches according to population than any city in the world. I take it that this is not because you have greater need for churches than other cities of your size, but because your people are God-fearing and churchgoing. I am recommending to the less sober-minded of our members to visit your churches before they leave. There is no better evidence of the quality of your citizenship than is to be found in the preparation you have made for the education of your children. On every side your city is dotted with school buildings whose architectural beauty and symmetry is a delight to the eye. Fort Smith is the only bona fide industrial city in Arkansas, and in proof of this statement I do not submit the statistics of your Board of Commerce so much as the demonstrable fact that it is the only city in Arkansas in which a linen collar can be soiled with furnace smoke and coal dust in a few hours. And your homes, reflective of your sturdy citizenship, have challenged our admiration and we have lingered long to inhale the perfume of your flower gardens which seem to adorn every door. The hospitality of your citizens, the welcome assured us, the preparations made for our pleasure have stolen our hearts and we surrender ourselves unto you to deal with us as it may please you.

PRESIDENT'S ADDRESS.

Thad Cothern, Jonesboro

The Family Doctor—Today and Tomorrow.

It was my privilege to be here at the meeting in 1911, and to preside during a part of the session because of the illness of the President, Dr. Dorr. In the enthusiasm of our young professional life then, we felt that we knew about all that was needed to be known by the family doctor. What we lacked in knowledge, we made up in zeal and initiative, and were tolerated so that in some way we got by.

Now, after nearly twenty years' more of work and study, we find that we know so little that often it is with fear and trembling that we try to guide the health of the family.

The trend of medicine for the past few years has been toward ultra-scientific clinicism and specialization.

Our profession is one that is being continually invigorated because of the influx of new blood by the entrance of the young physician, so that it constantly renews itself as the older, and perhaps less useful, appendages are being shelved or are dropping off.

The medical school training is quite different now to what it was when we first began its study, and the new graduate now has a different outlook and perspective to that held twenty-five or more years ago.

When we first entered upon our professional life, we had the idea that we should get into the general field and spend some years in general practice, after which we would be competent to specialize in some particular field. Now, practically every freshman in the medical college has his specialty selected and is able to tell us all about its advantages.

In some way we find that we are unable to get the idea out of our head that one should first be a general practitioner, specializing later, if found desirable.

We wish to quote from an article on specialization by Dr. F. S. Owen, which appeared in the June issue of the Nebraska Medical Journal:

"The 'Commanding Officer' Against Disease."

"The general physician for a time was swept off his feet and greatly bewildered on account of the sudden growth of the specialties and his apparent loss of standing and patronage. He awoke to find every region of the human body preempted and staked off. What had formerly been his sole care had apparently been taken over by specially trained doctors. He not only wondered what finally would be left for him to do but what the present status of his medical activities really was. He failed to fully realize and appreciate the fact that it was but the natural result of mod-

ern advance in medical science and a part of an orderly, well-organized and highly developed battle against the hosts of disease and that he, whether he realized it or not, still did and should occupy the position of commanding officer and that he alone was responsible for the preservation of cohesion and harmony in the forces marshalled against disease."

It behooves us all, more especially those who like myself have been in the harness for quite a while, to find out who and what we really are; what we stand for, what we are doing and what is expected of us. Let us examine ourselves, and meet the issue squarely. Am I sincere and honest with myself?—for if so, it will surely follow that my associates and my patients will find me so with them.

By a careful scrutiny we may find within ourselves unsuspected things, ideas, prejudices and motivations for action that we never dreamed existed.

Let us first debunk ourselves, before suggesting a reform for the other fellow. In the exercise of the Golden Rule and applied Christianity will be found a solution for most of our problems.

Within the last few years a new element has entered our work. For a time we tried to ignore it, but its presence and insistence goes on apace. We refer to the study of the patient himself or herself, which is embraced in the terms "psychology."

Again we beg your indulgence to quote the other man, namely, Dr. L. F. Barker, in the July issue of the Journal of the Michigan Medical Society:

"Psychology and the Physician.—We are in these days learning much about the relations of bodily type to emotional trend and much about the relation of temperamental type to social maladjustment. In our studies of patients today we are compelled to familiarize ourselves with the psychical and social history as well as with the somatic history of those who come to us for help; and we are realizing more and more that a knowledge of intellectual capacity, of personality make-up, and of social and antisocial tendencies, is just as important for the explanation and management of inadequacy of response as is a knowledge of physical, chemical and bacteriological relationships. The practitioner of tomorrow, even of today, must find himself seriously handicapped without more than a fragmentary knowledge of the motivations of human conduct, of the desires that men strive to gratify, and of the intrapersonal and social conflicts that may arise during the struggle for the satisfaction of these desires. Researches upon instinctive tendencies, upon disharmonies in these tendencies, and upon environmental circumstances that prevent the fulfillment of legitimate human desires, are indispensable for physicians whose duty it is to promote the welfare of single persons as well as that of society as a whole."

You can see from the foregoing some of the things your family doctor must consider. In his work he needs the specialist, and he needs him badly, while on the other hand, the specialist is in far greater need of the general practitioner. The doctor needs to know his patient as well as his patient's ailments.

Let us not decry the specialist, the clinician or the laboratory, for we have need of them all and the graduate of today is helpless without them. When we stop to consider for a moment we are surprised at the grasp our forebears in medicine had before the days of the microscope, the X-ray and other laboratory agencies now in constant daily use.

Should not we moderns more assiduously cultivate our faculties of observation and perception so that we can comprehend more of health and disease on contact with our patients?

On motion, following the addresses the General Session adjourned.

Dr. R. F. Liseher of Maseoutah, Ill., spoke on "The Country Doetor of Yesterday and Today."

The Moving Pieture, "This Great Peril," was shown by eourtesy of Dr. Dewell Gann, Jr., Little Roek, Chairman of the Committee on Cancer Control.

GENERAL SESSION.

Last Day.

Thursday, May 8, 1930.

The General Session was ealled to order by Dr. Cothern, the President, immediately after the adjournment of the House of Delegates.

Dr. Cothern: Is there any unfinished or new business to eome before this Soeiety? We will have the report of the Reference Committee.

REFERENCE COMMITTEE

By W. H. Mock, Chairman

We, your Reference Committee, beg to submit the following report:

We commend the efforts of the Arkansas Tubercular Association in their educational campaign and their endeavor to prevent the spread of Tuberculosis.

We endorse the thorough and enthusiastic work of the Committee on Cancer Control. It is our opinion that the Basic Science law is in its infancy and the elements of time and experience will prove its value and the best form of its application and enforcement.

Medical Registration—In order to keep in touch with all the practitioners in the State and also for the purpose of eliminating fraud and incompetence, we would recommend that all practitioners be required to register annually with the Board which issued their license.

We recommend that anyone doing any nature or kind of contract practice file a copy of this contract with the Board of Censors of their County Society, or with the Council of the State Society.

Medical Legislation—The present Medical Practice law gives us full and complete protection, if it were enforced. It states that no individual shall be issued a Certificate to practice Medicine in Arkansas, who is not a graduate of a reputable Medical School or College—and defines the meaning of the word "reputable"—and in the face of this law, the products of disreputable diploma mills are being licensed and the pernicious influence that proceeds from this source has in-

vaded our Medical ranks and reflected discredit and dishonor upon a profession which has in its plan and purpose the relief, welfare, safety and protection of humanity.

The President, in his address, has adopted a policy that is constructive and will serve well the best interests of this Society. He has conducted the affairs of the office in the most efficient and satisfactory manner.

The committee wishes to state that this has been one of the most pleasant and instructive meetings in its history. We thank Fort Smith sincerely for all the wonderful kindness and courtesy we have received at your hands—and to the doctors of Fort Smith—we appreciate and admire you for your skill and scientific knowledge, and also for the wonderful spirit of friendship, hospitality and good fellowship that has been so much in evidence throughout the entire meeting.

Committee:

WILL H. MOCK
W. A. SNODGRASS
W. M. MAJORS

The Chairman: You heard the report. Shall we adopt the report as a whole or take it up section by section?

Dr. Gann, Sr.: I move that it be adopted as a whole.

Carried, on being seconded, by a standing vote.

Dr. Cothern: I will introduce to you our President, not our President-Elect, who has served his apprenticeship during the past year. I hereby relinquish the gavel to my worthy successor, Dr. Barlow.

Dr. Barlow: It is a duty and pleasure for me to present to the Arkansas Medical Society its President-Elect, Dr. D. A. Rhinehart. The hour is late and I am not going to detain you with any more reports. We have had sufficient, I think. I want to say this, that I approach my task not unmindful of its duties and responsibilities, and, if I may have your cooperation, it will be a pleasure for me to go the human limit to maintain the high standards that have been given us by those worthy men and leaders who have preceded me as President of the Arkansas Medical Society. Again assuring you of my appreciation of the honor you have conferred on me, I thank you. (Applause.)

George B. Fletcher, delegate from Hot Springs, introduced the following resolution, which was seconded by several and unanimously carried:

WHEREAS, the Goldman, Ward and Main Hotels were unsparing in their efforts in administering to our comfort and pleasure during our attendance and visit in the city and especially Mr. John England, manager of the Goldman Hotel, who proved himself a princely host, untiring and alert in every particular to see that all were cared for properly and their stay be made most enjoyable, and

WHEREAS, the Chamber of Commerce, through its head, Mr. George Carney, and to Mayor Fagan Bourland whose welcome and individual keys to all doors in the city made us feel immediately that we were at home; the nurses, who so ably assisted in the Convention Hall, and

WHEREAS, the press whose courteous publicity so generously bestowed; therefore be it

RESOLVED, that we, the Arkansas Medical Society, express our sincere appreciation and most profound gratitude.

Dr. Gann: I move that the resolution be adopted.

Carried, on being seconded.

The Chairman: Next comes the selection of the next place of meeting.

Dr. J. M. Proctor: Mr. President and Gentlemen of the Arkansas Medical Society—In behalf of the Hot Springs-Garland County Medical Society and the Chamber of Commerce we of Hot Springs extend you a cordial invitation to come and meet with us next year. I don't think there is very much I can tell you about Hot Springs. You have had the pleasure of having been over there a few times and you know something about it. We give you a cordial invitation to meet with us. (Applause.)

The Secretary: I would like to supplement the invitation from Hot Springs by showing you a handful of telegrams coming from the hotels, civic organizations and the Chamber of Commerce from Hot Springs.

Dr. G. C. De Bolt: On behalf of the Drew County Medical Society and the Monticello Chamber of Commerce, we wish to extend to the Arkansas Medical Society a cordial invitation to hold its convention in the city of Monticello next year. This invitation expresses the wishes of the citizenship of Monticello and the officials of the undersigned organizations." Signed by Jack Craig, president of the Chamber of Commerce, and Dr. M. Y. Pope, President of the Drew County Medical Society. I would like to say a word concerning that; that while our town is small, we have ample hotel facilities and a good auditorium. Monticello is served by the Missouri Pacific Railroad and three State highways, 4, 13 and 35, and a bus line to Pine Bluff, and should you elect to come to Monticello next year I can assure you a cordial welcome.

Dr. L. J. Kosminsky: Gentlemen and President of the Arkansas Medical Society—

I haven't any telegrams or special letters. I only speak in behalf of the medical fraternity of Texarkana, which is represented by men from the State of Arkansas and the State of Texas. In behalf of both mayors, Chambers of Commerce and yours truly, I ask you to hold your 1931 meeting in the city of Texarkana, that you can reach by bus lines, by railroads or by airline, as we have a city, Texarkana, Ark., that owns its own airport and we will be glad to have you and will receive you cordially. We haven't had you in nearly 20 years. (Applause.)

The Chairman: Are there any others who would like to have us? If not, we will proceed to ballot. We will use the same tellers.

After two ballots were taken, Texarkana was selected as the meeting place for 1931.

On motion, the convention adjourned *sine die*.

MEMORIAL SESSION.
First Presbyterian Church,

Wednesday, May 7, 8:30 to 9:30 A. M.

The Memorial Session was called to order by Dr. J. M. Lemons, of the Committee, the chairman, Dr. W. M. Gibson, of Nashville, being absent.

Deceased Members.

Gracey Waddell, Jonesboro, January 12, 1929.

William Wesley Ireland, Gentry, June 17, 1929.

Andrew Meek Mayfield, El Dorado, August 20, 1929.

George Franklin Hynes, Fort Smith, September 7, 1929.

Edward C. Pyatt, Pine Bluff, November 2, 1929.

Wiley B. Barner, Wynne, November 4, 1929.

Benjamin F. Walker, Jonesboro, November 15, 1929.

Add A. Evans, Bald Knob, November 29, 1929.

William W. Thrower, El Dorado, November 30, 1929.

John Stewart, Booneville, January 3, 1930.

James Thomas Jelks, Hot Springs, January 5, 1930.

Adam Robert Bradley, Morrilton, January 6, 1930.

Forrest Albert Corn, Lonoke, January 28, 1930.

Charles Hastings Cargile, Texarkana, February 13, 1930.

Fred Thomas Murphy, Brinkley, February 17, 1930.

St. Cloud Cooper, Fort Smith, March 22, 1930.

Edward Meek, Little Rock, April 10, 1930.

John Lewis Smiley, Siloam Springs, April 15, 1930.

James Leon Greene, Hot Springs, April 21, 1930.

Horace F. Villars, Little Rock, April 24, 1930.

Invocation by Rev. B. V. Ferguson, D. D., pastor, First Baptist Church.

Our Heavenly Father, we lift our hearts to Thee this morning in thanksgiving in an effort to express our gratitude for Thy marvelous goodness and loving kindness toward us. We thank Thee, O God, that our lives have been preserved to see this hour and for all the good things which Thou hast given us. We would acknowledge Thee as the giver of every good and perfect gift and of all the temporal blessings as well as spiritual blessings to sustain us in this life. We thank Thee for Him who died that we might live. We thank Thee, our Father, that in Him we live and move and have our being. And now we come this morning to invoke Thy blessing on the exercises of this hour. We thank Thee for the men who have been set apart to minister to the bodies of their fellowmen. We thank Thee for the trained minds, for the sympathetic hearts and for the skilled hands, dedicated to the great task of relieving human suffering. We pray Thy blessing upon these men who have dedicated their lives to this high and important work in the human family. We pray Thee to bless each of them in their work. Our thoughts this morning go back to their comrades who have fallen along the way. We invoke Thy blessings upon their loved ones. May the good hand of God lead them. We thank Thee for all the discoveries, for all the inventions, for all that men have done to make life happier and healthier and to make the world better. We pray that Thou wilt lead us on together, as we minister to the souls of men and as we minister to the bodies of men, as we seek to make human society better, and happier and cleaner, as we seek to do that which we believe will have the approval of our God, as we seek to do that which we believe will promote human happiness and well-being. Bless all that shall have participated in this program at this hour. Bless all the sessions of this convention. May Thou guide us in Thy ways. May our footsteps walk along the path which the Great Healer marked out for us. May we be true and faithful unto Thee in all the avenues of life that we may live well, that we may serve well, that we may go in peace to our future abode on High when this life shall have been finished. We ask it in His name and for His sake, Who died for us, Jesus Christ, our Saviour and Lord. Amen!

"Nearer, My God to Thee," by the Quartette.

Dr. Lemons: At this time the Rev. Lathrop of the Episcopal Church will give the eulogy.

Rev. C. D. Lathrop: Speaking of the fact that many physicians have sacrificed their lives to the advancement of medical science, they are by no means the only heroes of the profession—for no other calling, it is safe to say, demands such utter devotion to duty, and in no other profession is devotion more loyally given. If there is nothing more that a man can do than to give his life for his fellow men, then the physician who gives his life in true and loyal service is as great a hero as any soldier the world has ever known.

My grandmother, the wife of a Confederate soldier, found herself very precariously housed in an old building which had suddenly become the very center of shot and shell. Opposing forces had met. The woman then hardly more than a bride, had hastily sought such shelter as would safeguard her bringing a new life into the world. A surgeon of the Union army discovered the woman and her negro attendant there and immediately devoted himself entirely to her, undoubtedly saving her life and that of her child. That man knew neither North nor South—he just knew human needs. Yet, he did exactly what any physician would do. Physicians are like that!

I have heard of a surgeon whose entire fortune depended upon his giving immediate instruction, via telephone, to his broker. He was in the midst of a delicate operation, on a charity patient. He lost his fortune, every dollar of it, but he saved the patient's life.

A certain doctor refused large royalties for his contribution to medicine. He wanted nothing but the privilege of working, helping suffering humanity, as long as he lived.

Not long ago, I conducted the funeral service of an old M. D., a general practitioner, who had spent nearly fifty years as a "family physician" in a small town. The many bowed heads and tear-dimmed eyes betokened the esteem in which he had been held, but the pride with which the boast was made by ever so many, "he ushered me into this world, and my baby, too," bespoke a love and abiding confidence that was more than esteem.

The pages of history are filled with the noble deeds of soldiers and statesmen, but on the hearts of men there are inscribed names of good and true men whose devotion to duty meant life and hope and happiness—ministers of health, apostles of peace, glorious examples of self-sacrifice.

May the memory of them never fade, but brighten the path for their successors, that the profession they have honored ever remain true to the ideal of utter devotion to the cause of healing.

Solo: "Face to Face," by Mrs. H. H. Smith.

Quartette: "Abide With Me."

Dr. Lemons: At this time we will have the address by one of our physicians, who needs no introduction to you. He is a man that has seen the medical profession rise in our State and he is personally acquainted with most every one if not all of the deceased members. Dr. Vinsonhaler, of Little Rock.

MEMORIAL SESSION.

Dr. Vinsonhaler: I am about to perform a service, the most tender that one can perform in this place, the House of God, with music, with service and with the hallowed sweetness of a woman's voice. As your chairman has just said, all of these men whose names I shall read to you, were personally known to me and most of them friends for more than a third of a century. The names are as follows (reading from the list). Information concerning these men has been furnished to me by the secretary and by friends since my arrival in Fort Smith.

Dr. St. Cloud Cooper, who died March 22, 1930, was born in 1861 at Jefferson, Texas; moved in 1866 to Carrollton, Missouri; graduated at the Missouri Medical College in 1882, practiced at Tilden, Texas, from 1883 to 1886, post-graduate student in Brooklyn, N. Y., in 1886-1887, practiced at Jefferson, Texas, from 1887 until 1895. In 1895 he came to Fort Smith and here resided until his death. He was a member of the American Medical Association, the American College of Surgeons, had served as president of the Sebastian County Medical Society, the Arkansas Medical Society and Medical Society of the Southwest; was a member on the clinical staff of the Sparks Memorial Hospital and of St. Edwards Mercy Hospital, a member of the executive staff of the Memorial Hospital for 30 years; not long ago was president of the school board, was a 32d degree Mason and a member of the Elks and Knights of Pythias and Chamber of Commerce and was a public-spirited man.

Another letter furnished me since my arrival concerns one that I met here in 1896 when I attended the meeting of the Arkansas Medical Society in Fort Smith, Dr. George Franklin Hynes. He was born in Brookville, Ontario, Canada, June 30, 1848. His family moved to Cleveland, O., when he was 14 years of age. He lived there for a number of years. It was here that Dr. Hynes received his medical education. He graduated in 1879 from the Western Reserve University. He practiced medicine in Cleveland for about three years and then came to Van Buren in 1883. I recall Dr. Hynes very distinctly at the meeting held here in 1896.

Dr. Edward Meek died in Little Rock, April 10, 1930, at the age of 77. He was born in 1858, practiced in Little Rock and in North Little Rock.

Dr. J. L. Smiley of Siloam Springs, Dr. Villars of Little Rock, and Dr. Forrest Albert Corn of Lonoke passed away this year. Dr. Corn was a member of one of the old families of Lonoke County. He graduated in medicine from Vanderbilt University in 1891 and practiced in Lonoke until his death. Dr. W. W. Thrower of El-Dorado died November 30, 1929, age 57. Dr. John Stewart, of Booneville, superintendent of the Arkansas State Tuberculosis Hospital in St. Louis, January 3, 1930, age 60, died from an injury received while riding a few months before his death.

Dr. Adam Robert Bradley of Morrillton, Ark. graduated from the Memphis Medical College and took post-graduate work at the Johns Hopkins Hospital. Dr. James Thomas Jelks of Hot Springs died in California, January 5, 1930, age 49, a dis-

tinguished name, a member of a distinguished family from Alabama.

Andrew Meek Mayfield of El Dorado died suddenly in Monroe, La., while en route to New Orleans with his wife. Dr. Mayfield was an active member of the Arkansas Medical Society.

Dr. Charles Hastings Cargile died in Dallas, Tex., February 13, 1930, age 77. He was a graduate of the Jefferson Medical College in Philadelphia; first practiced in Okolona in Pike County and moved to Bentonville in 1893 where he remained until six years ago. Dr. Cargile was a former president of the Arkansas Medical Society, a member of the first board of trustees of Henderson College, Arkadelphia.

Dr. Fred Thomas Murphy, of Brinkley, Ark., died February 17, 1930, while visiting in Memphis, age 62. He was born in Forrest City and moved to Brinkley upon graduating from the medical college.

Dr. Wiley B. Barner, of Wynne, Ark., died November 4th. When I heard of Dr. Barner's death, my recollection went back 45 years ago when he and I received together the degrees from the president of the university. Dr. Barner had been identified with neurological work in this State and at one time upon the staff of the State Hospital for the Insane and practiced at Vanndale and then at Wynne.

Dr. Edward C. Pyatt, of Pine Bluff, was formerly health officer of Jefferson County. Benjamin F. Walker, of Jonesboro, died November 15, 1929. He was an honorary member of the Arkansas Medical Society. St. Cloud Cooper, of Fort Smith, age 69, head of the Cooper Clinic, and leading physician and surgeon of Western Arkansas. Dr. Cooper was active in the last years of his life in medical society work. Dr. Cooper had just come to Fort Smith when I was here attending the Society in 1896. He was a young man, very active, as I remember him, a man who made a host of friends. It is a singular thing that you may know a man all his life and yet something of the man remains unknown to you. Some great philosopher has said that in the human heart always remains a mystery which God alone knows. Dr. Cooper was not only a wonderful physician and successful physician but a man of varied tastes and interests. One may not have known that unless they knew the doctor intimately.

I remember once being in Concord, Mass., the place where the "shot was fired that was heard around the world," and just a little distant from the Concord Bridge where Davis of Acton fired the first shot. And as we walked down the old roadway to see that statue of Edward Chester French of "The Minuteman," a little girl came up to us. She was barefoot, I remember, a child perhaps 12 years of age. She said, "Can I show you the grave of Thoreau?" In a spirit of mischief, I said to her, "Who is Thoreau?" She looked at me rather inquiringly. She didn't know whether I was serious or not. She finally decided that I didn't know. Why, she said, "He was the man that knew what the little birds thought." I was struck with the innocence of the child. Sometimes children speak from the heart and say things that are so true. I am told that Dr. Cooper was interested in birds, that he was interested in the things of Nature and that in his life he occasionally lectured to societies upon that subject. Someone has said that a man who is a physician and nothing else is never a very good physician. I don't know whether that is true or not. I sometimes doubt it because in life there comes those interests which are apt to attract and charm us away from work and from those things to which we should devote ourselves to the exclusion of other things. In Dr. Cooper's death there has been a void left in this community that no one can fill. "To leave and live in the hearts of those we leave behind is not to die." Some men have erected monuments of marble, some men have written great works that have immortalized them; others have painted exquisite pictures and some have built for themselves in the community in which they live a monument that will last as long as time endures. Dr. Cooper was such a man, and how pathetic it is when you question those that knew him and loved him and depended upon him how they tell you that no one can come to take that vacant place. Is there any tenderer tribute that can be paid to the memory of a man than that thing?

Dr. Cargile, whom I mentioned awhile ago, was a personal friend. I met him, too, in Fort Smith 34 years ago. I had heard of Dr. Cargile through Dr. Gibson, who was a warm personal friend of mine. I had known him by his writings in the medical journals and I was struck with the man when I met him for the first time as being utterly different from anyone that I had known up to that time. I think you can sometimes better understand a man by knowing what he is not as well as knowing what he is.

Jay Gould at one time was being questioned before a legislative committee as to his political beliefs, as to his principles. In a spirit of cynicism, and without any shame, he said, "In Republican districts I am a Republican. In Democratic districts I am a Democrat. In districts that are doubtful, I am doubtful. But at all times and in all places I am an Erie man and I am for Jay Gould." That never could have been said of Charles Hastings Cargile.

I remember to have read in the excavations of Pompeii about the wonderful things that were therein revealed that told the life of the people of that period. At the Gate of Pompeii submerged in the hot cinders that burned out his life was the figure of a Roman soldier. When that terrible holocaust came, when darkness came, the Roman centurian remained at his post. There came to him the alternative of death or dishonor and, like the Roman that he was, chose death. I sometimes picture the features of that man as he faced the alternative as men sometimes have to face it. What he did was for the glory of Rome. What he did has made the Roman people a synonym for the name Honor. And the same thing could be said of Dr. Charles Hastings Cargile. In the presence of dishonor, never for one moment did he falter. He may have been mistaken; there were times perhaps that he was, but as he lived out the span of his life and as he faced death, I feel certain, my friends, that when the Angel of Death came to close those lips forever, they must have whispered those two enduring words that were the great passions of that stormy life, Courage and Honor.

I want to say something about Dr. Greene. He was a factor in public life in Arkansas, a great administrator, a great neurologist, a man who carried with him constantly that ideal of public service; he was a dynamic personality, a man of courage and a man of action. Dr. Greene died as he would have liked to have died, in doing a great public service. He was explaining to a

commission in the Marion Hotel at Little Rock the advantages of the location of the State Hospital for Nervous Diseases, when the Angel of Death touched him. He said, "I believe I must quit." He sat down, and in the arms of someone who was present, he died. For a man who had been active as he had been and who knew and had felt perhaps many a time as he had experienced the exigencies of his daily professional life, he turned his face doubtless as many of us do who have reached that age to the west and said, "Watchman, what of the night?"

I remember when in command of a hospital in France an orderly came to me one evening just as I was closing my books, and he said, "You are wanted in room" so-and-so. He said, "There's a captain there dying, and he wants to turn over his effects to you." That was one of our duties, to take charge of all the personal effects of the officers and of the men who died under our command. So I went with the orderly and I found the captain there, a man perhaps 45 years of age, and he was in the throes of death. He asked me to sit down, which I did. I saw that he was not going to live long. The sweat of death was upon his face. He was making his last fight. And, he said, "Are you a Mason?" I said, "I am." He said, "That's a great comfort to me." He said, "I am not long for this world, I know. I am going. I want you to take my watch and all the letters from my wife that I have tied together. I want you to take my personal effects and send them to her. I want you to tell her at this time that you saw me, that you were with me when I died and that I love her more than at any time in my life." I said, "My friend, I will do that for you." And he said, "I want you to hold onto my hand. I want you to see when I am dead that I am taken back to my own country, the United States." He said, "I want to be buried there." I stayed with my friend until he passed away. We made arrangements that his last wish should be complied with and that he should go home and be buried where the Flag went up every morning and went down at night. I thought it was the least that I could do for a man who had given his life for it.

Now I shall say but little more, but in closing I want to say this to you: That this service which we have just performed for these that have passed away is one of the most tender that it is possible for us to perform and in all love and reverence we do it.

I want to say something more about one whose face we miss here today, a face that we loved. He was not a doctor and yet he had been identified with the profession of medicine in this State for more than 25 years—Mr. F. S. Overton. He was the official stenographer of the Society. I used to say in a joking way when I took part in discussions or when I made any remarks that I was little concerned with what I said because it would always appear in the Journal infinitely better than I was able to say it. He in his affection for some of us would take liberties with us, he would change the verbiage of things we would say, and always to our advantage. I told him one day that he made me say things I had never felt or believed. Well, he said, "Weren't they better than anything that you ever had felt or believed?" I said, "They were. I am not going to interfere with you, because I know if I make any mistakes or don't say the things I should, you will say them better for me in the Journal." We all loved Mr. Overton. He was a man of foibles but of infinite tenderness, with a heart like a child's. Now we will have to become accustomed to the fact that he is no longer with us, that the face that we knew and loved we will not see again at the meetings. We can only say in memory and in loving tenderness, "Goodnight, old friend, goodnight, goodnight."

Dr. H. Moulton: I want to mention the name of a physician who for many years was active in our State Society, who, on account of ill health, had for the past 10 or 15 years resided in California, and who died about two months ago. Of course, he was not at the time of his death a member of our Society, but he had been very active, and who many of the older doctors will remember. I refer to Dr. B. Hatchett. He was a man who honored his friends and left most of his fortune at his death to medical institutions in Arkansas, in Fort Smith. I can't help but mention his name because I think Memorial Exercises in which we didn't remember him would be incomplete. I thank you.

Dr. Lemons: At this time, Mrs. Rhinehart, who represents the Ladies' Auxiliary of the Arkansas Medical Society, will have something to say.

Mrs. D. A. Rhinehart: As I sat here listening to Dr. Vinsonhaler, the thought came to me that, if the Woman's Auxiliary had been fortunate enough not to have lost any members this past year, still we should have a part in this Memorial Service. We are an auxiliary to the Arkansas Medical Society in all that the word implies. That is, we are here to back you up in the things you do. If we share in your joys, then certainly we should share in your sorrows.

However, we have not been so fortunate. During the past year we have lost two valuable members, viz., Mary Case Craig, wife of Dr. Stark Craig of Independence County, who passed away in August, 1929, and Leota Troxell Henderson, wife of Dr. G. L. Henderson of Faulkner County, who died September, 1929.

Mrs. Johnston of Batesville will tell you very briefly what Mrs. Craig meant to our auxiliary and to her community.

Mrs. O. J. T. Johnston: In the loss of Mrs. Craig, October 27, 1929, not only does our auxiliary sustain a great loss, but the State as well. Mrs. Craig was a good and willing worker. She was a Christian woman with very high ideals and always glad to do whatever she could for the good of humanity. We

miss her inspirational presence in the home, in the community, in the church and in our auxiliary. But her memory lingers with us like the poem "Excelsior."

Mrs. Rhinehart: Mrs. McCollum of Conway will tell you about Mrs. Henderson.

Mrs. I. N. McCollum: Lillie Leota Troxell Henderson, wife of Dr. G. L. Henderson, was born September 12, 1872. She pased into the Great Beyond on September 25, 1929. In her passing we have lost a true and valued member of our auxiliary. Her creed was faith and there was never a doubt in her perfect trust. We usually judge the success of a life by its accomplishments in various fields but we always know that the criterion of true value is Service, and that Mrs. Henderson attained to the highest degree. We miss her in our Auxiliary for her loyalty was unswerving. She gave herself unselfishly to her family, her church and her community. She was a patient sufferer through a lingering illness. To her husband and children we offer our heartfelt sympathy,

"But we know and fearlessly say:
Death is not a wall, but an open door,
Not a folding forever of the wings,
But the spread of the pinions to soar."

Benediction by Rev. Frank P. Anderson, Pastor of the First Presbyterian Church.

Recessional by the organist, Miss Hattie Mae Butterfield.

County Societies

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in Blytheville, July 8, 1930, with the following present:

Ellis and Barrett of Wilson; Harwell and Massey of Osceola; Luckett of Dell; Robinson and Brewer of Leachville; Morris, McCall, Tipton, Washburn, Saliba and Smith of Blytheville.

J. A. Crisler, Sr., Whitman Rowland and H. W. Qualls of Memphis, Tenn., and Dr. Futrell of Paragould were visitors.

The scientific program was as follows:

"Practical Talk on Diabetes Millitus," Dr. Whitman Rowland.

"Ovarian Cysts With Special Reference to Their Malignancy," Dr. J. A. Crisler, Sr.

E. R. Barrett of Wilson was elected to membership.

Book Reviews

Osteomyelitis and Compound Fractures—By H. Winnett Orr, M. D., F. A. C. S., Chief Surgeon of the Nebraski Orthopedic Hospital, Orthopedic Surgeon Lincoln General Hospital, Consulting Orthopedic Surgeon Bruan Memorial Hospital, Lincoln, Nebraska. Illustrated. Published by The C. V. Mosby Company, St. Louis. Price $5.00.

This book describes the author's method for the treatment of infected wounds, especially of bones and joints.

An interesting introduction is given by Dr. John Ridlon, Newport, R. I. Other chapters as follows: Sir Joseph Lister and Antisepsis; Lessons From the Great War; Osteomyelitis; Compound Fractures; Clinical Results.

New and Nonofficial Remedies, 1930.—Cloth. Price, $1.50. Pp. 481; xlviii. Chicago: American Medical Association, 1930.

The present edition contains all of the features that have in the past made New and Nonofficial Remedies such a reliable and efficient a guide to the physician who wishes to inform himself on the newer medicinal preparations: logical classification of preparations, with authoritative articles on each class; complete and carefully written descriptions of preparations; elaborate indexes; and a useful cumulative list of references to the literature on articles not accepted by the Council. Among the more important revisions that appear in this edition are those of the general articles, Barbital and Barbital Compounds, Digestive Enzymes, Cod Liver Oil and Cod Liver Oil Preparations, Ovary, Pituitary Gland, Radium, Radium Salts, Serums and Vaccines. Among the new preparations descriptions of which appear for the first time in this edition are: Bismarsen, which is sulpharsphenamine bismuth; Dial-Ciba, which is diacetylbarbituric acid; Calcium Gluconate-Sandoz, a more palatable and less irritating preparation of calcium; Atoquinol-Ciba, a cinchopen derivative; Pitocin and Pitressin; solutions respectively of the oxytocic and pressor principles of the pituitary gland; Viosterol (the Council name for irradiated ergosterol) in the forms of Viosterol in Oil 100 D, which is irradiated ergosterol dissolved in vegetable oil, and Cod Liver Oil with Viosterol 5 D, which is cod liver oil with its vitamin D potency enhanced by addition of viosterol. While these new preparations (with the possible exception of Viosterol) do not constitute major additions to the physician's armamentarium, each one

gives promise of relative usefulness, and the physician who desires to keep abreast with the progress of therapeutics will familiarize himself with them as well as with the many other new preparations described in this valuable book.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1929. With Comments that have appeared in The Journal. Cloth. Price $1.00 Pp. 81. Chicago: American Medical Association, 1930.

This is the volume in which the Council annually collects the reports on articles found unacceptable during the year. This edition contains also several interesting preliminary reports on preparations which show promise but for which the evidence is not yet sufficient to justify acceptance by the Council. Reports are given on the following products rejected by the Council: Anayodin, claimed to be iodoxyquinolinolin sulphonic acid (chiniofon) but marketed under a noninforming name without adequate statement of composition and with unwarranted therapeutic claims; Antiustio, an unscientific mixture marketed under a nondescriptive name with unwarranted therapeutic claims; Kerasol and Keraphen, unoriginal products marketed under non-informing names; Sodiphene, an unoriginal alkaline phenol preparation marketed under a proprietary name with unwarranted therapeutic claims; Borocaine, procaine, borate under a proprietary name; Quicamphol (Transpulmin, a quinine preparation for intramuscular injection in the treatment of lobar pneumonia; Toxogon, a preparation of inadequately declared composition marketed under a therapeutically suggestive name; Intramuscular Iron Arsenic Comp. (No. 201) and (Intravenous) Iron Cacod. and Glycerophosphate (No. 202), two irrational and unscientific mixtures exploited with emphasis on the numbers. Other rejected products are: Ovoferrin, Tamerici Salts, Elixir Kacyan-McNeil and Tablets Kacyan-McNeil. An authoritative article on serum disease and serum accidents by Mackenzie and Hanger is of considerable interest and timely importance.

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Original Articles

SOME OF THE UNSOLVED PROBLEMS OF SYPHILIS*

LOYD THOMPSON, M. D., F. A. C. P.
Hot Springs National Park

In venturing to discuss the unsolved problems of syphilis I may well be accused of an unwarranted temerity, for in spite of the advances made in our knowledge of this disease during the past quarter of a century, since the epoch-making work of Metchnikoff and Roux, who in 1903 were first able to transmit syphilis to the lower animals, there is much yet which we do not know, many milestones of discovery and application to be passed before we reach our goal, a world sans syphilis.

So it may not be amiss to consider some of these milestones, and if possible rend the vail of obscurity of the future, and try if we can to read the answer to our problems.

The remarkable achievement of Metchnikoff and Roux was followed in rapid succession by the discovery of the causative organism of syphilis by Schaudinn and Hoffman in 1905, the development of the universally used blood test by Wassermann in 1906, and the discovery of the great remedy, salvarsan, or arsphenamin, by Ehrlich in 1910.

The years following have brought to us no such outstanding achievements as those just mentioned, but they have given us the successful cultivation of the spirochetes *in vitro* and their demonstration in the brains of paretics and the spinal cords of tabetics. They have given us the Swift-Ellis and other intra-spinal therapy. Tryparsamid and bismuth, malarial inoculations and the precipitation tests, to say nothing of a better understanding of the epidemiology, the pathological anatomy and physiology, and the clinical aspects of the disease, as well as a further development of the pioneer work of Metchnikoff, Schaudinn, Wassermann and Ehrlich.

But what of the future? What of the milestones of discovery and application which must be passed? What is there yet to learn?

These milestones may well be considered under a number of headings dealing with various phases of the disease, its history, its biology, its diagnosis, its prophylaxis and its treatment.

The problem in the history of syphilis which is yet unanswered to the satisfaction of all concerned is that of its origin, and for over four centuries medical men have debated it. Did this now world-wide disease have its beginning in the dim recesses of antiquity and be transmitted in an uninterrupted stream to modern times, or, was it born over night, as it were, at the close of the fifteenth century? Was syphilis known to the ancients, or did Columbus' men contract it from the native women of the Isle of Espanola and introduce it into Europe upon their return? These are the questions which have vexed syphilographers for four and a quarter centuries, and in spite of the weight of authority on both sides they have not yet, as I say, been answered to the satisfaction of all concerned.

Those who claim for syphilis an ancient origin quote from the Hebrew Bible and other early writings to substantiate their claim. The story of the death of King David's first born by Bath-Sheba after seven days of life, and David's subsequent lamentations concerning his own ailments,

("My strength faileth because of mine iniquity, and my bones are wasted away.")

are cited to prove that the author of the Psalms contracted syphilis from the beautiful

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

but unfaithful wife of Uriah, and while quite suggestive are not conclusive. Still others have gone so far as to assert that certain prehistoric bones found in Japan and other regions show evidence of this disease.

The claim that America was the cradle of syphilis is based largely upon the rapid spread of the disease over Europe soon after the return of Columbus. At this time it assumed a most virulent epidemic form, decimating whole communities, maiming tens of thousands for life and causing untold sorrow and suffering. However, the question of its ancient origin seems to me to have been settled definitely by recent researches by Karl Sudhoff, the eminent medical historian, in the literature of the fifteenth century written before the sailing of Columbus, which show that the "big pox" was known to Europe at that time and well established methods of treatment were in vogue.

The problems of biology which seem to demand our closest attention have to do with the spirochaeta pallida. First, is the corkscrew shaped tri-motile, pale, difficult-staining organism, a bacterium, and the one and only form of the germ which causes syphilis? Or, is this only one phase of a life cycle of a protozoon such as that described by MacDonough? This is a question which has not yet been answered with surety, and we must look to the future for its solution, although I may say that there is some evidence, which will be touched upon later, which certainly points to another, or resting stage in the life cycle of the organism.

The second biological problem which remains unsolved is the one of strains. Is there but one strain of the spirochaeta pallidum, and are all of the multidudinous symptoms and lesions of this protean disease due to causes other than the variation in strain? Or are there two or more strains or sub-varieties of the organism, each with a special predelection for certain tissues or organs of the body? A great deal of evidence that such is the case has been gathered, primarily from the clinical side, but also from laboratory work. Part of this evidence consists of the well known observation of the occurrence of conjugal tabes and paresis in which both husband and wife, infected from the same strain of organism, develop the same manifestations of the disease. Other similar conditions have been observed, such as the famous series of cases reported by Matanschek and Pilcz, in which five Austrian Army Officers, infected by the same woman, all developed paresis. And one need scarcely mention the almost universally observed fact that luetics who have marked skin lesions rarely develop neuro-syphilis, and that usually neuro-syphilitics give no history of extensive syphilodermata. However, in our present state of knowledge it is impossible to say just where the factors of possible strain have their beginning, or where the individual variations in the host may end.

From the point of view of the laboratory a number of different workers have isolated strains of spirochetes with which they have been able to demonstrate differences in the primary lesions and other manifestations in experimental syphilis. So much so, in fact, is this the case, that laboratory workers in this field speak with a great deal of assurance of the various strains of the spirochaeta pallida. However, it would seem that there is still a great deal of work to be done along this line before we can be absolutely certain of our premises.

In the realm of diagnosis we find one of our most perplexing problems. This problem at present is one of application rather than of discovery. It is the indisposition on the part of the practitioner to employ the dark-field. This through education should prove easy, but apparently it is not, for the percentage of practitioners who use this most valuable instrument in diagnosis is very small indeed. However, in the future this should prove unnecessary, for it is well within the range of possibility that a differential stain for the spirochete will be developed, which will be as easy of application as the Gram stain for the gonococcus. But whether or not this desirable end is reached the practitioner of the future will be able to recognize the *Spirochaeta pallida* in syphilitic chancres. And not only will he recognize it, but he will apply his knowledge to all suspicious lesions. Furthermore, he will recognize that while a positive diagnosis of syphilitic chancre may be accomplished in a few minutes, a negative diagnosis should not be made under four months. When spirochetes are not found in a suspicious lesion, after repeated attempts, it takes at least that length of time to follow up with periodic serological tests.

Another diagnostic problem which remains unsolved has to deal with the Wassermann test. What is the nature of the reaction and why should an antigen prepared from normal

tissue react, for practical purposes, with only a syphilitic serum? These questions apply with equal force to the newer precipitation tests, but so far they have eluded the vigilance of laboratory workers, and it must remain for the future to answer them.

Paternal transmission of lues has ever been a moot problem, and in spite of a great deal of evidence pro and con it must be stated that this elusive question still remains one of the unsolved problems of syphilis. Certainly, however, it must be admitted that unless there is a rest form of the *spirochaeta pallidum*, as intimated above, much smaller than the recognized form, paternal transmission is a physical impossibility, for how could an organism 8 to 10 microns long lodge itself in the head of a spermatozoon only 2 to 3 microns in length?

And now as to treatment. When the great Ehrlich gave salvarsan, or arsphenamin, to a grateful world he was heralded as the saviour of mankind, for it was believed he had found a drug which at one fell blow would rid the body of the deadly spirochetes, and although this dream has not been realized, and probably never will be, arsphenamin with its related products has proven to be one of the greatest remedies of all time, and places the name of Paul Ehrlich alongside of those of Hypocrates, John Hunter and Pasteur.

However, the milestone which must yet be passed and which when passed will outshine nearly all others is the one of improved therapy. What profiteth us if we develop a therapy, no matter how effective it may be, if it can be used only by the expert? Today the trained syphilologist blithely employs intravenous and intramuscular therapy, imagining the entire profession doing the same. But it is not so. Generations of physicians administering mercury and the iodides per os have left their stamp upon the country, and even many city practitioners, and they cannot, or do not change. But in the future there will be no necessity for change, for the bright milestone I have mentioned—and I think it is not so far down the road either—is the development of a potent mouth-administered spirillicide.

Now what of the febrile reactions, particularly the malarial inoculations, in the treatment of syphilis?

As early as 1887, Wagner von Jauregg commented upon the reaction of concomitant fevers in psychoses. In his first experimental work in the treatment of general paresis, this investigator employed Koch's old tuberculin, and in 1909 reported favorable results. His work was confirmed by Pilez. Later, Wagner-Juaregg used typhoid vaccine to produce the febrile condition, but soon reached the conclusion that the best results were to be obtained only when there actually was present a concomitant infectious disease. Inoculation with tertian malaria seemed to offer the greatest promise, owing to the comparative ease with which the plasmodia may be destroyed, and in 1917 Wagner-Jauregg began his inoculations of paretics with these organisms. In 1922 he reported on 200 patients with general paresis who had been treated in this manner, 25 per cent of whom had been able to resume their former occupations. For this work Wagner-Jauregg was awarded the Nobel prize in Medicine.

Numerous investigators, both in this country and in Europe, have employed this interesting method of therapy and the reports of complete cure—that is, cases in which complete remission, enabling the patients to resume their former occupations—obtained, vary from 23.7 per cent, in Nonne's 240 cases, to 31 per cent, in Kirchbaum and Kaltenbach's 196 cases. Wagner-Jauregg states in his latest report that, in early cases, nearly 100 per cent of cures should be obtained, and that three of his oldest cases had had complete remissions for six and one-half years.

This, of course, brings up the problem of the *modus operandi* of the febrile reactions. Is the undoubted benefit from this method of therapy due solely to the rise in temperature, or is there some other factor, such as a biological reaction between the malaria plasmodium and the spirochaeta which may account for the results? Most observers believe that it is the fever alone which is beneficial, but some cling to the belief that there is something else, and the future must decide.

There are doubtless many more milestones to be passed which I have not glimpsed down the road to our goal, but they will be passed and we shall step out from the darkness and fog of ignorance and timidity, into the light of knowledge and achievement. No more will our Davids lament,

"My strength failed because of mine iniquity.
And my bones are wasted away."

No more will our asylums echo with the grandiose delusions of the paretic. No more will our men in the prime of their lives stamp

the pavement in their ataxie gait, and cry out in the pain of their gastric crises. For in that day we shall be free of the tyranny of the spirochete! We shall live in a syphilisless world!

DISCUSSION

DR. D. W. GOLDSTEIN, Fort Smith: I think Doctor Thompson is wrong in the title of his paper. I think the title of the paper should be "Syphilis, the Unsolved Problem," and not the "Unsolved Problems of Syphilis."

It is not so much for us to worry about who started the spirochete to going, but it is up to us to find out the cause of the damage done by the spirochete. All syphilis is not treated alike. There should be individualized treatment. I disagree with Doctor Thompson that the general practitioner has to wait for the time to come when syphilis can be cured by a drug given by mouth before he can treat syphilis. For syphilis to be controlled it is necessary for the man in the smaller towns to treat syphilis as well as the physician in the city. The man who first sees the primary lesion of syphilis is the one who should be held responsible for the future life of that case. The patient should be talked to and explained to as to the problems of syphilis and the necessity of long observation and treatment.

Visceral syphilis should be approached with care. Salvarsan should be held off until last and the patient treated with iodides and mercury. If you do not do this you will often produce a too rapid healing of the lesions in the vital organs.

Doctor Thompson stated that arsphenamin is the greatest drug in the treatment of syphilis. I agree with him that arsphenamin is a great drug and produces wonderful results when handled properly, but a great deal of damage can be done with this drug if it is used alone and no thought given to that of mercury, iodides and bismuth in syphilis.

If a patient comes to my office with syphilis and lives in a small town where he can be treated more conveniently by the local physician than by me, I think it my duty to consult with the doctor in this locality and aid him in the treatment of this patient at home. When you do this, you will do the patient a great service and you will also help the local doctor.

DR. E. A. PURDUM, Hot Springs: Dr. Thompson has given you the most comprehensive survey of what is taking place in reference to the treatment of syphilis in the shortest paper you have ever listened to or will ever listen to. He didn't get up here to outline the treatment or to tell you what to do for syphilis, but in a general way he told you what had been done up to this time. The future will unfold itself. A great deal has been done up to date in ridding a good many syphilitics of these ills that he called your attention to, and more will be done in the future, whether it happens to be bismuth, arsphenamin, mercury or otherwise.

DR. C. E. BENEFIELD, Fort Smith: The essayist's reference to the malarial inoculation in dealing with some types of syphilis was interesting to me for the reason that I attended the Texas Southern Medical Conference and this question came up, relative to malarial inoculation. Dr. George W. Crile of Cleveland, Ohio, I think it was said, "If you try everything else and you fail, and you lose the confidence of your patient restore his confidence by doing this stunt. That is one of the greatest things, not only as a therapeutic agent, but one of the greatest things to inspire your patient with confidence he said, "You need not fear ever losing your patient as he is so sick that he is afraid to quit you and seek other medical aid lest a serious mistake is made, when you have him under your grip with your malaria infection." He said to give 10cc. of the fresh blood from a malarial subject, 5 intravenously and the other intramuscularly, and he said in due time, of course, that patient would have a violent chill and consequent fever and all other manifestations of malaria and a real sick man. He said, he would be so sick that he certainly would be afraid to quit you, because he knew you did it, and he would be afraid to quit you because he felt like he would die if he fell in the hands of any one else that didn't know just what had been done to him. So he said, "to let the patient have about twelve of these chills and consequent fever, unless he was physically unfit for the ordeal, then administer the anti-malaria and then the salvarsan, neo, arsphenamin, mercury, etc., in the usual way. And he said that the result of the malaria was evidently anti-toxic in some mysterious way, or somehow had the effect of making up an anti part to syphilis." It seems that the fact of this malarial inoculation makes him so sick and, when the antidote is administered he gets suddenly so much better as to effect that this alone inspires confidence and consequent resolution. So this effect upon the mental condition of such patients is not bad. As to why such treatment gets these patients better we do not know just what it was, but the anti-toxin or something about the malarial made it easy to cure these cases. He said, "that the patient would often get better and really cured when you gave him that kind of treatment when nothing else would and advised that some cases be given such treatment."

So, individually our experience in dealing with syphilis has been just as variable as our individual results. I don't know if I will try that remedy or not, but it was interesting to me and I was glad to hear Dr. Thompson bring that point out in his essay this afternoon, which has made for me a very interesting number—of course, the malarial phase of the treatment of syphilis is of too recent a discovery for any of us to take it very seriously as yet, but I sincerely hope this in time, will prove good everything claimed for it by its most enthusiastic supporters or advocates.

I want again to say that I enjoyed the doctor's paper so much, as in his essay he has given us the 1930 model of his subject.

DR. THOMPSON, in closing: I don't know that I have anything particular to add except possibly as to malarial inoculation. I was talking to Dr. Clark of New York, who is with the Social Hygiene Association, just recently back from Europe, and he tells me in practically all of

the German clinics they are using malarial inoculation as a routine in the treatment of neurosyphilis regardless of whether they are paretic, tabetic or what not. And he also says that in some of the clinics they are using the malarial inoculation in the treatment of other types of syphilis, even of primary syphilis, and claim they are getting some very good results. My own experience with it has been somewhat limited. I have just started using it this spring and have only used it in four cases, but I feel very much satisfied with the results in these cases. Two of them were early paretics and two were neurosyphilitics or other types. The two early paretics in which I used it both seemed to have very greatly improved in their mental condition after their chills and fever. Their people tell me they could see an improvement in them; that they were brighter and didn't have the delusions they had had before and felt very much encouraged over them. I haven't, of course, had an opportunity to observe them long enough to tell, but I am sold on the subject of malarial inoculation. They are mighty sick patients for a while. One of them had a temperature of nearly 107 and he was pretty sick but as long as their general condition is good I don't think there is any danger in using this type of treatment, and it certainly does offer the hope that nothing else has given us particularly in the treatment of early paresis.

IRRITABILITY OF THE ALIMENTARY CANAL: WITH ITS TREATMENT*

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Two years ago before this society I read a paper entitled Simple Colitis (1), using a name coined by Kantor. In that paper I described the symptoms, the roentgenological findings, and the diagnosis. Since the term simple colitis may be misleading, for the present discussion I am calling the condition irritability of the alimentary canal as being more inclusive. The object of the present paper is to review and emphasize the data on the condition, to correlate certain physiological, clinical, and anthropological facts, their relationship to this and other conditions, and to discuss treatment. In it I shall advance the theory that this is a deficiency disease, that it is caused by insufficient vitamin D or its physiological equivalent, with a consequent disturbance in calcium utilization.

The symptoms of irritability of the gastrointestinal tract are irregular fixed and shifting pains throughout the abdomen, back, and chest, nervous instability, palpitation of the heart, headaches, nausea, vomiting, constipation, discharge of mucus from the colon, distention, eructations of gas, faintness, weakness, increase or loss of appetite, cankers in the mouth, and apprehension. The chief complaints are "nervousness," "bloating," gas pains, epigastric distress after eating, gas pressure on the heart, smothering, weakness, and constipation. (2) The fixed pains are almost always in the right side of the abdomen where definite localized spasms can be demonstrated in the cecum, the ascending colon, and just to the left of the hepatic flexure. The shifting pains occur most often in the left side of the abdomen and in the epigastrium. These symptoms and complaints are very familiar to all of us and are easily recognized as being the subject of many attempts at classification.

With the increase in medical knowledge during recent years, a different interpretation must now be placed on these symptoms. Following the work of Graham (3) and his associates on gall-bladder function and diagnosis, there came a change in the significance of some of them. Also with the refusal of many surgeons to accept a diagnosis of chronic appendicitis many of the rest of them were left unattached. Whereas distention, gaseous eructations, constipation, epigastric distress, and constant pains in the right upper quadrant were formerly thought to be due to chronic cholecystitis, (4) they are now known to occur in patients with normal gall-bladders. The same symptoms, with the addition of pain in the right lower quadrant from spasm of the cecum, are also known to occur after the appendix has been removed and in the absence of adhesions. They frequently are encountered in patients in whom no organic disease can be demonstrated by the most careful roentgenological examination.

In 500 consecutive roentgenological examinations of the gastrointestinal tract done in our laboratory, we reported irritability in 274 patients, or in 54 per cent. In 180 of these, or 36 per cent, we reported irritability with no evidence of organic disease or adhesions. In the other 94, or 18 per cent, we reported organic disease associated with irritability. I am unable to say how many of the 500 patients had organic disease and irritability in whom we did not report the irritability because of a desire to be as conservative as possible in reporting a new condition. Therefore, the above figures are probably too con-

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servative. The conclusion to be drawn from this series is that irritability is by far the most common cause of symptoms arising from the alimentary canal, and, as a cause of abdominal distress, is more common than all the other conditions combined.

The laboratory findings in simple colitis or irritability are inconclusive. The gastric acid may be slightly higher than normal, normal, low, or absent. (5) The blood calcium may be normal or low. Minot and Cutler conclude from experimental evidence that a normal blood calcium level need not in any way justify the idea that calcium therapy will be of no value. (6) The erythrocyte count and the hemoglobin content of the blood may be low. The demonstration of mucus in the stools seems to be the only laboratory test of any value. I have not tried the various stimulating procedures such as Erb's, Trouseau's, and Chovstek's (7).

The relationship of this condition to age and sex is unimportant for it occurs in all ages and in both sexes.

Body habitus and the height of the hollow viscera in the abdomen have no relation to irritability of these organs. In fact, there seems to be more sufferers with high viscera than with low. In this connection I am reminded of the old phrase "fair, fat, and forty, and belches gas-gallstones."

On the other hand it has been observed that this condition is most prevalent in the winter and early spring months and in those persons who spend most of their time indoors. Under such circumstances there is an initiation of the condition or an exaggeration of the symptoms. The common factor in both the seasonal and the occupational incidence is a deficiency in these patients of the effect of the vitamin D component of the direct rays of the sun. It has also been observed that most persons suffering with this condition are addicted to a bulky diet and one with a high carbohydrate content. All of them seem to receive a sufficient quantity of vitamins A, B, and C, but very little vitamin D, from their food.

The reason for the lack of vitamin D is that civilized races seem to be ignoring the fundamental factors and conditions which obtained during and influenced our period of evolutionary development. Unicellular animals, from which all animal life evolved, possibly did not need vitamin D because they were perfused with a solution containing approximately the same percentage of inorganic salts that human blood now shows. This solution was sea water. With the development of an integument, vitamin D became the regulating influence for the control of inorganic salts. In the fishes this substance occurs in the liver and body oils. When man's ancestors became land animals, by changing their environmental element it became necessary to obtain both the inorganic salts and vitamin D from sources not as readily available as sea water. The only known sources of vitamin D for the higher animals are ultra-violet rays, fish oils, and egg yolk. Butter fat also furnishes a small and inconstant supply. During the developmental period, it is apparent that there were times when vitamin D could not be obtained from these sources. However, since the physiological action of vitamin D and the parathyroid glands is fundamentally the same, (8) (9) (10) the higher animals may have developed the parathyroids as an auxiliary source of this vitamin. Since he lived in the open during the hundred thousand years of the paleolithic and neolithic periods, man received most of his vitamin D from the sun. Contrary to common belief, caves were infrequently used as dwellings. Henry Fairfield Osborn, America's leading anthropologist, gives these facts of the stone ages (11).

Since the stone age, besides changing his habitat from the open to an inclosure, man has changed his diet. Osborn says that primitive man lived on meat alone (11). Under these conditions there developed the greatest race of men that the world has ever seen. The Cro-Magnon man of Europe was superior in stature and brain size to any race living today. To be fair, it may be granted that early humans ate a few plant substances just as the carnivora occasionally eat a few green leaves. However, to show that plant substances are unnecessary in man's diet, there is the evidence of Heinbecker (13), Lieb (12a), (13), Stefansson (13), Anderson (13), and Tolstoi (12a), that Eskimos do, and white men can, live on meat alone, without developing many of the degenerative and deficiency diseases of civilized races.

If primitive man lived for a hundred thousand years and if man today can live an entire life on a strictly meat diet, and if primitive man lived his entire life in sunshine, then there may be something amiss with the habits of civilization. The result of the failure to

recognize these fundamental factors of evolution may be seen in the large number of developmental, degenerative, and irritability diseases. That deficiencies frequently occur is demonstrated by such developmental diseases as rickets (14), such degenerative diseases as pernicious anemia, myocardial degeneration, and arteriosclerosis (15), and by such irritability diseases as asthma (12), infantile spasmophilia (16), and mucous colitis (12). Lowered resistance to infection has also been noted (17). The list of diseases attributed to unnatural conditions of life would fill this page.

To this impressive list I wish to add irritability of the alimentary canal. It appears that the parathyroid glands may be only emergency sources of vitamin D and are inadequate for the supply over long periods of time and under excessive strain, such as in growing children and pregnant women. Also the familial occurrence of the irritability diseases suggests an inherited weakness of the parathyroids. Blunt and Cowan (18) say that it is plain that many children grow up and many men and women live from day to day with very little vitamin D from their food. Tisdall and Brown (19), claim that the antirachitic effect of sunshine is low when the sun is below thirty-five degrees elevation. With such an insufficient supply from outside sources and with an excessive strain on the parathyroids, it is probable that irritability diseases may develop in adults just as rickets develops in children.

If irritability of the alimentary canal is due to a deficiency of vitamin D, or parathyroid secretion, and calcium, one should be able to show a similarity to tetany. The following definition of tetany is given by Marine (7): "Tetany is a clinical syndrome occurring after parathyroidectomy, or spontaneously, and is characterized by gradually increasing hypersensitiveness of the nervous system and by a painful tonic spasm of certain groups of muscles or even of the entire musculature." Following the definition he adds that increased motility and spastic contractions of the stomach and intestines have been observed. Trouseau's phenomenon is given as an increased spasticity and pain following mechanical stimulation of muscles which are in a state of tetany. In irritability of the alimentary canal there are tonic spasms of the prepyloric region of the stomach (5), and the sphincters of the colon, and a generalized increased motility and tone of the entire canal (1). Analogous to the increase in tetany of the skeletal muscles in Trouseau's phenomenon there is, with mechanical stimulation, such as from a bulky diet, an increase in all the symptoms and the roentgenological findings in gastrointestinal irritability. Pottenger (20), and Starry (21), say that pain from the hollow abdominal viscera comes from distention and spasms. In this connection remember the complaints of bloating and gastric distress after meals. Therefore, the pain in irritability of these viscera may be attributed to gas, bulky contents, and spasms (20).

A removal of the mechanical stimulation relieves the pain. Physics, enemata, liquid diets and a total abstinence from food decrease the distress. This fact probably accounts for the tremendous quantities of physic medicines that are used. It also may account for many of the types of treatment which have been advocated for this condition. These treatments make use of the principle that an empty bowel is more comfortable than a full one. However, the treatments do not cure the condition. Bastedo (22) says that it may take a year to cure mucous colitis by such treatments.

If a bulky diet is prescribed for these patients, as seems to be the tendency in some attempts at cure, the tetany grows worse and the associated mucosal irritability progresses to the state of mucus formation. The nervous instability also increases until it appears to verge on a psychosis. Although the advanced condition is a natural result of Trouseau's phenomenon of mechanical stimulation, these patients often have been called neurasthenic. The nervousness may be divided into the components of tetany and apprehension. What is more natural than for these patients to fear an incurable disease and operations if they have suffered for years without relief? Following the roentgenological examination, nearly every patient in whom I have seen irritability of the gastrointestinal tract has asked me if he has a cancer or if he must have an operation.

Even after operations for proved organic disease, it is well known that patients often fail to obtain relief from gastrointestinal distress. Perhaps the failure to recognize the associated irritability accounts for many of these failures. Surgeons (4) and roentgenologists know that gallstones are frequently silent. The removal of such calculi will not

relieve symptoms of tetany. Higgins (23) reports a case of proved tetany of the small intestine who was not improved by removal of gallstones and an adherent appendix, but who did get well after parathyroid and calcium therapy. Cattell (24) says that failure to get relief after operation for chronic cholecystitis is usually due to an incomplete or wrong diagnosis. McKenty (25) says that the neurotic patient is little benefited by the removal of a diseased, non-functioning gall-bladder or vermiform appendix, and is sometimes made worse. Jordan (28) says that treatment of irritability of the alimentary canal will make surgery unnecessary for adhesions. Starry (21) says that there has yet to be presented to us a conclusive proof that there is such a clinical disease as chronic appendicitis without the history of a previous acute attack. The conclusion apparent from the surgical failures is that the irritability has not been successfully treated.

A note of warning must be sounded against erroneous diagnoses of abdominal diseases. The prime essential in diagnosis is a full appreciation of the history, symptoms, and objective findings in irritability. Otherwise the demonstrable organic lesions will be thought to produce the symptoms. In the presence of a typical history and typical symptoms of irritability, a careful roentgenological examination will establish the diagnosis by ruling out organic diseases. Blood and urine examinations and gastric analyses will increase the information. Some confusing conditions are nephritis, cardiac decompensation, malaria, and stomach ulcer. Since there is often a tetany following healing of a duodenal ulcer, the roentgenologist should be careful to evaluate the symptoms in patients who have a deformity of the duodenal bulb.

In conclusion I wish to call attention to Langstroth's (15) idea that many chronic degenerative diseases are due to deficiencies in diet.

TREATMENT

The treatment of irritability or tetany of the alimentary canal may be divided into medical, dietetic, and surgical. The medical treatment is the same as the treatment for any type of tetany. Since it has been shown that cod liver oil and viosterol are much slower than parathyroid substance or extract in the treatment of tetany, tenth-grain doses of fresh dried parathyroid gland are used in treating gastrointestinal irritability. This substance is given after meals with 5 or 10 grains of calcium carbonate and a glass of milk. In a few patients viosterol has not given relief for several days. Fortunately the patients treated in this manner were of the courtesy class and, in spite of the delayed relief, did not consult another physician. As soon as complete relief is obtained, it may be wise to stop the parathyroid and calcium. Ten days has been sufficient time to obtain relief in the most advanced cases.

The diet suggested is a concentrated one with due regard to vitamins A, B, C, and E. Oranges, raw tomatoes, and lettuce will furnish these vitamins. All bulky food and cellulose is prohibited. Meat and milk are emphasized, the milk for vitamins and gall-bladder evacuation. The object of the concentrated diet is to relieve distention and to conform to what appears to be natural for human beings. These patients are not allowed any artificial means of emptying the colon.

Under this treatment relief of the pain and constipation occurs in a few days. The patients with a chronic gastritis and seybalous stools who have had distress for a few weeks are relieved in twenty-four hours. The ones with marked constipation, mucus discharge, and severe headaches are relieved in a week or so. The results lead to the belief that physiological constipation does not exist in the presence of a concentrated diet and sufficient vitamin D. Rogers, Coombs and Rahe (26), and Fawcett, Rahe, Hackett and Rogers (27), report that parathyroid lessens muscle fatigue and promotes intestinal peristalsis. This may be the reason why constipation disappears at once.

Since many patients have been cured of symptoms of gastrointestinal irritability with surgical treatment, such measures must be included. Perhaps the enforced rest of the colon and the usual hospital post-operative diet of milk and eggs have been the key to the cure in some of these patients. When indicated, organic lesions in the abdomen should be treated by surgery. Although there is strong evidence that chronic appendicitis is not a clinical entity, an appendix that shows stasis, spasms, distention, or deformity may give the same symptoms as distention and spasms of the intestines. The result after the removal of such an appendix justifies the procedure. With Jordan (28) it is believed that surgery will be more successful and that re-

lief will be more certain if the irritability is treated both before and after the operation.

The prophylaxis of irritability of the alimentary canal is a restoration of the natural conditions of living. It is suggested that morbidity would be greatly decreased with a return to living conditions prevailing during the stone age but modified by our present knowledge and economic factors. To prevent a return of tetany in those patients who have had it, such conditions are essential. Patients in whom there is an annual return of the irritability diseases with the seasonal decrease in the altitude of the sun should be told to take cod liver oil in the late fall, winter, and spring months. Every one should drink at least a pint of milk a day. This quantity furnishes the daily calcium requirement for an adult (12) and there is the added advantage of emptying of the gall-bladder. Most people are secretly glad when told to eat meat, but are surprised when told to eat no roughage unless demanded by appetite. The prevailing craze for vegetables has led the Medical Research Council of the British Medical Association (29) to issue a warning that vegetables are very distasteful and irritating to children and that they should not be forced to eat them in the face of an instinctive repulsion. There need be no fear that these patients will crave vegetables if placed on a meat diet. Stefansson (13) says that after a few days on meat there is no craving for other food.

Occasionally patients will disregard the prophylactic rules and will return with the same symptoms of irritability. A short period of the treatment suggested will quickly restore their health.

SUMMARY

1. Irritability of the alimentary canal is a more common cause of abdominal distress than all the organic lesions of the alimentary canal and the gall-bladder combined. The pain is due to a tetany from vitamin D and calcium deficiency and a mechanical stimulation.

2. The treatment of this condition is parathyroid gland, calcium, a concentrated diet, and surgery when indicated.

3. The prophylaxis is a restoration of the living conditions necessary to avoid the deficiency.

4. The theory that many degenerative and irritability diseases are deficiency conditions is repeated and discussed.

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DISCUSSION

DR. S. J. WOLFERMANN, Fort Smith: Due to the fact that in the past I have done some work which is similar in some respects to the work here reported by Doctor Rhinehart, he asked me if I would open the discussion of his paper.

We have just heard a paper that may possibly open up a new era in gastroenterology. There is no question but what a large majority of the cases that come up for gastrointestinal and x-ray study when finally worked out show as a most prominent feature of the study a gastrointestinal irritability. A great deal of our errors in the past have undoubtedly been due to the mistake of working routinely with a roughage diet.

In 1924 before the Southwest Medical Association I read a paper reporting cases of spastic constipation treated with calcium chloride and parathyroid, giving the calcium chloride intravenously. That work was similar in many respects to the work done and reported in this paper. My work at that time I consider an absolute failure. I have known for some time, which is further supported by Doctor Rhinehart's work, that the failure was probably not due to the calcium chloride, but due to the fact that we were trying to use a roughage diet instead of the low residue diet of today.

The stimulus for this work goes back I believe to Doctor Pottenger and those men who first started treating asthma with calcium chloride on the chemical basis that calcium replaces the sodium potassium ions in the cell protoplasm and reduces the spasticity and irritability in this way.

I wish to congratulate the doctor upon his very fine paper, and I feel that I have learned considerable from it, and that it may open up a new line of treatment.

THE RED CROSS AND THE PREVENTION OF BLINDNESS

The League of Red Cross Societies is inaugurating on a world-wide scale work on behalf of the blind, especially that devised with a view to preventing blindness.

Outstanding educational programs have been carried out in the United States, where the American Society for the Prevention of Blindness, founded twenty years ago, has 25,000 members and a budget of $140,000. This Society sent as delegates to a preparatory meeting held in 1928 in Europe, Lewis H. Carris, its director, and Miss E. P. Brown, secretary. Through the efforts of these delegates a report was prepared setting forth provisionally work accomplished to date in the countries of the world on behalf of the blind and weak-sighted.

In the United States, the report states, work done comprises the collection of information, co-ordination of activities and awakening of public opinion. In collaboration with scientific authorities and in close liaison with health organizations, consultation centers are established. Evaluation of hazards in industrial occupations is attempted, problems of weak-sighted children in educational institutions are considered, and legislation relating to blind persons or persons with defective sight is supported.

Following a later conference held in Paris, it was decided to recommend the foundation of a permanent International Bureau. On September 14, 1929, therefore, the International Association for the Prevention of Blindness was founded, upon the adjournment of a meeting held in Scheveningen under the Chairmanship of General Van Diehl of the Netherlands Red Cross. There were present 74 ophthalmologists representing 25 countries.

Dissemination of knowledge that elementary precautions may save sight is already bearing fruit throughout the world, it was pointed out. Vaccination in Western Europe has resulted in the almost complete disappearance of blindness due to smallpox, so prevalent in bygone years. Social hygiene education minimizes the dangers threatening the new born infant and adult. Leaders of industry now plan to avoid eye injury to workers, and trachoma is being held in check by phophylactic barriers in countries where hygiene prevails.

Through the interest evidenced by the League of Red Cross Societies it is planned to translate into action a vast educational program for the prevention of blindness, reaching all countries and all classes of society.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

ABSTRACT OF PROCEEDINGS OF HOUSE OF DELEGATES OF AMERICAN MEDICAL ASSOCIATION AT THE DETROIT SESSION, JUNE 23-27, 1930

The first session of the House of Delegates at the Eighty-First Annual Session of the American Medical Association held in Detroit, Michigan, June 23 to 27, 1930, was called to order by the Speaker, Dr. F. C. Warnshuis, at 10 a. m., Monday, June 23.

Dr. F. C. Warnshuis, Speaker, in his address to the House of Delegates recommended that the House of Delegates should have one executive session at each annual meeting for the purpose of giving the most careful consideration possible to matters pertaining to policies of the Association. This recommendation was later adopted by the House of Delegates.

The Speaker also recommended that a reading clerk should be appointed to read all reports and resolutions in order to insure that all members of the House are able to hear and so definitely to understand the import of these communications to the House. The Reference Committee to which the address of the Speaker was referred recommended the adoption of the Speaker's suggestion with the provision that any delegate who preferred to read a resolution or other communication submitted by himself should be priviliged to do so.

ADDRESS OF THE PRESIDENT

Dr. Malcolm L. Harris, President, in his address to the House of Delegates, referred to the proposed establishment in European countries of universal medical service by the government. He discussed the present National Health Insurance Act in effect in England and the proposal of the British Medical Association to provide a nation-wide medical service, the establishment in Prussia of an occupational tax levied on physicians, and other developments of a somewhat similar nature in Europe.

Dr. Harris renewed the recommendations offered by him as President-Elect at the Portland Session to the effect that component county medical societies should incorporate and establish medical centers owned, controlled and managed by the members of these

societies, where all classes of persons who are unable to pay regular fees can be given the highest type of medical treatment at prices within their means.

The President discussed the work and the purposes of the Committee on the Costs of Medical Care and gave specific information concerning certain principles adopted by that committee at its last meeting, which are as follows:

1. The personal relation between physician and patient must be preserved in any effective system of medical service.

2. The concept of medical service of the community should include a systematic and intensive use of preventive measures in private practice and effective support of preventive measures in public health work.

3. The medical service of a community should include the necessary facilities for adequate diagnosis and treatment.

An important recommendation offered by the President was that the House of Delegates should authorize and request the Board of Trustees to establish a Bureau of Medical Economics whose functions shall be to study all economic matters affecting the medical profession. A similar suggestion was contained in a resolution offered later in the session by the delegates of the California Medical Association.

ADDRESS OF THE PRESIDENT-ELECT

In the address of the President-Elect, Dr. William Gerry Morgan, the House of Delegates was asked to give consideration to the advisability of holding a mid-year meeting of the House of Delegates, always in the headquarters of the Association in Chicago.

A considerable portion of the address of the President-Elect was given over to a discussion of the relations of government to hospital maintenance and of the relation of the physician to the hospital. In concluding this part of his address, Dr. Morgan laid down the following principles:

1. The physician is no more obligated to provide for the care of the indigent sick than his fellow citizen.

2. In mutual charitable undertakings for the care of the sick, each citizen contributes what he has; the laymen, physical necessities; the physician, professional skill. But each has a right to protect himself from exploitation and to judge of the merit of the recipients of his bounty.

3. When a hospital offers its facilities to a mixed clientele, pay, part pay and pauper, the distinction between the sources of those facilities should be clearly recognized. The physical equipment and service is of general public origin, and their uses may be sold or given away in the discretion of lay boards; but the professional facilities are, and always must be, the contribution of the medical staff as individuals and cannot become in any sense the property of the institution.

4. When a hospital is owned and operated by the government and supported by taxation, to which the medical profession contributes its due proportion, medical attendance should be paid for by taxation, along with all the other facilities supplied by the institution.

5. No hospital, instituted and supported by public philanthropy or community cooperation of any kind, should be permitted to increase its revenues and so reduce its financial burden on the public, by any system of collecting fees for medical attendance, and thus engaging in the corporate practice of medicine.

6. The membership of the Association should be guided by these principles in accepting posts on the staff of hospitals, and should refuse to support by the contribution of their services, or by the references of their patients, any institution violating them.

REPORT OF THE SECRETARY

The Secretary reported that the enrolled membership of the Association on April 1, 1930, was 99,181, and that during the year 1929 the deaths of 1,378 members were recorded.

The number of Fellows on April 1, 1930, as shown, by the Secretary's report was 65,419.

A table was presented showing the number of counties, the number of component county medical societies and the number of counties not organized, the number of physicians in each State and the number of members in each of the constituent State medical associations.

A large part of the Secretary's report was devoted to a discussion of the need of the development of a more militant spirit in county medical societies and in State medical associations to the end that each of these units of medical organization, in its sphere, will become more efficient in advancing the science of medicine, in improving the means and methods of its application, in bettering the public health and in persistently opposing anything and everything that would reduce the medical profession to the status of a trade or of a socialized group of hirelings.

INCOME AND EXPENDITURES

The financial statement submitted by the Board of Trustees showed that the gross income of the Association for the year 1929 was larger than in any previous year, but that increased expenditures due to enlargements and improvements in the publications of the As-

sociation and in the expansion of the work of the various councils, bureaus and departments more than offset the gain in gross income. The net gain for the year was $257,654.86—$19,000 less than the net gain reported for the year previous. The outlay occasioned by increased activities in practically every department was, exclusive of the department of publications, approximately $26,000 greater than in 1928.

The Board of Trustees commented on the constantly increasing demands that are being made for greater service and pointed out that the natural development of the Association would inevitably necessitate larger annual expenditures and that the expansion and improvement of service, together with the necessary installation of equipment to replace that worn out by constant use over a period of many years, and the provision of more adequate housing facilities will inevitably demand a larger income than has heretofore been realized.

THE JOURNAL AND OTHER PUBLICATIONS

The net paid weekly average circulation of *The Journal* for the year 1929 was 96,220, showing an increase of about 3,000 subscribers.

The report of the Board of Trustees showed that, with a single exception, each of the special journals recorded a gain in circulation in 1929, although in some instances the gain was very small. The total number of names on the mailing lists of the special journals on December 31, 1929, was 23,125. The net loss sustained through the publication of this group of journals in 1929 was less by $8,000 than in the preceding year. The Board of Trustees made grateful acknowledgment of the service rendered by the editorial boards of the special journals, the members of which serve without compensation.

The Quarterly Cumulative Index Medicus, considered to be one of the most important ventures sustained by the Association, was, according to the Report of the Board of Trustees, enlarged and improved during the year and plans for further improvement were submitted to the House of Delegates. Announcement was made that the annual contributions of the Carnegie Institution, which has generously supported the Quarterly Cumulative Index Medicus, would be terminated in 1931, and the Board of Trustees expressed the hope that some philanthropic agency might be concerned with securing for the Index an adequate endowment to insure its permanence.

The circulation of *Hygeia* was reported to be well over 75,000. Approximately 70 per cent of *Hygeia's* subscribers are laymen, and approximately 30 per cent are physicians. The gain in circulation in 1929 was more than 10,000, this gain having been recorded principally among educators and other professional groups outside of the medical profession. The income derived through the publication of *Hygeia* in 1929 was sufficient to pay publication costs and leave a net gain approximating $10,000.00. The Board of Trustees appealed to the physicians of the country for their whole-hearted support of *Hygeia*.

COUNCIL ON PHARMACY AND CHEMISTRY

In February, 1930, the Council on Pharmacy and Chemistry entered upon the twenty-fifth year of its existence. One of the objects announced at the founding of the Council was the publication of an unofficial pharmacopoeia for new drugs to provide tests and standards for such preparations as might have promise of therapeutic usefulness, pending the time when they should be eligible for the Pharmacopoeia. This eminent object of the Council has been strikingly fulfilled, and each succeeding year finds increased evidence of the Council's successful performance and of its increasing usefulness to the medical profession.

Another object declared at the inception of the Council on Pharmacy and Chemistry was that a salutary influence should be exercised over the claims made for proprietary medicines in advertising. With the establishment of the Council, advertising in *The Journal* was limited to preparations reported on favorably and to claims permitted by the Council. This rational supervision was extended to other publications of the Association and soon the official organs of constituent State medical associations gave support to the work of the Council until, at the present time, all of the State medical journals, with two exceptions, limit their proprietary advertising to products passed by the Council. A considerable number of medical publications not controlled by constituent State medical associations likewise give their support to the Council's work.

The report of the Board of Trustees contained a rather extensive description of the activities of the Council on Pharmacy and

Chemistry, which is composed of seventeen men of outstanding prominence in the scientific world. The members of the Council serve without compensation and give a large amount of their time to its work.

In view of the widespread popular interest in the use of properly selected foods for the promotion of health and the consequent exploitation by commercial interests of food products with a health appeal, the Council on Pharmacy and Chemistry has created a special Committee on Foods. This committee examines the non-medical products for which health claims are made and publishes in *The Journal* and in an annual publication, "Accepted Foods," descriptions of products found to meet the committee's requirements and also of those found unacceptable.

The Therapeutic Research Committee of the Council on Pharmacy and Chemistry reported that eleven grants amounting to $3,000 were made during the year 1929. These grants are intended to be of assistance as supplemental to other resources of scientific investigators.

COUNCIL ON PHYSICAL THERAPY

The Council on Physical Therapy reported increased activities during the year covered by the report of the Board of Trustees, these having been concerned chiefly with the dissemination of information concerning the merits and limitations of physical methods and energies as therapeutic agents. Progress is slowly, but surely being made in divesting physical therapy of exaggerated and uncritical claims with which its advance has been hampered. An increasingly conservative and scientific attitude on the part of the better manufacturers of physical therapeutic equipment and on the part of authors of papers on physical therapy is being noted. Scientific investigators in the larger universities and medical schools are seriously undertaking experimental work in determining the biologic effects of light, heat and physical exercise and their limits of therapeutic application.

By means of special articles, addresses before scientific societies and other gatherings and radio broadcasts under the auspices of the Council on Physical Therapy, the medical profession and the public are being informed of the possibilities and impossibilities of physical therapy as a curative or preventive agent.

In all of its educational activities this Council endeavors to point out the importance of physical therapy in medicine as an adjuvant rather than as a sole method of treatment. The Council expressed its opinion that too much emphasis has been placed on apparatus therapy and not enough on the possibilities of such measures as heat, massage, therapeutic exercise and occupational therapy.

The Council has cooperated with the Bureau of Investigation in exposing worthless devices by conducting experiments to determine the physical characteristics of such contrivances and their actual biologic effects. The Council has also cooperated with governmental agencies and other investigative bodies in combating the sale of harmful and useless apparatus for the purpose of self-treatment. The publishers of a number of the better periodicals have conferred with the Council regarding claims that might legitimately be made in advertisements of devices sold to the public.

The various committees of the Council have prepared and published reports dealing with nomenclature in physical therapy, with x-rays as a diagnostic agent, and with x-rays and radium as therapeutic agents in deep-lying and superficial conditions. A committee on education is preparing a bibliography on physical therapy and related subjects, and the Committee on Standardization has undertaken a critical survey of the scientific literature.

BUREAU OF LEGAL MEDICINE AND LEGISLATION

The work of this bureau as described in the report of the Board of Trustees has covered a wide scope and has been vigorously prosecuted in the interests of the medical profession and the public.

The report of the Bureau describes its activities in opposing legislation of the type of the Sheppard-Towner Maternity and Infancy Act and in opposing bills introduced in Congress designed to bring about revolutionary changes in the laws relating to narcotic control which would make the medical profession subject to a government bureau in which power would be vested that would destroy the validity of licenses issued by the States to physicians in so far as they apply to the use of narcotics.

The report of the Bureau of Legal Medicine and Legislation as submitted to the Board of Trustees discusses at some length World War Veterans' legislation under the provisions of

which the United States Government would provide free medical and hospital service for any and all persons who served in the World War irrespective of the service origin of diseases or injuries affecting the proposed beneficiaries of such service. The policies contemplated in such legislation have been actively and persistently opposed by the American Medical Association.

Rulings have been issued by the Commissioner of Internal Revenue to the effect that the taxpayer has the "right to consider the entire amount received as professional fees as earned income if the taxpayer is engaged in a professional occupation such as a doctor or a lawyer, even though the taxpayer employs assistants who perform part or all of the services, provided the client or patient is that of the taxpayer and looks to the taxpayer as the responsible person in connection with the services performed.

"This ruling will also apply to income received as professional fees from a professional partnership even though the partnership employs assistants who work on a salary basis provided the clients or patients are that of some active member of the partnership and look to some active member of the partnership as responsible for the services performed."

These rulings of the Commissioner of Internal Revenue were made as the result of an appeal made by Drs. Arnett and Crockett of Lafayette, Indiana, with whose counsel the American Medical Association cooperated with counsel employed by the Association.

Changes in tariff of interest to physicians were discussed in the supplementary report of the Board of Trustees which showed that although duties have been increased on a considerable number of articles necessary for the diagnosis and treatment of disease, the increases were held down to a point below that demanded by certain manufacturers of surgical instruments. The Bureau of Legal Medicine and Legislation actively opposed undue increases in tariffs on surgical instruments and appliances used in the practice of medicine. The Board of Trustees, in its supplementary report to the House of Delegates, had the following to say: "It will be regretted if the increased duty paid by importers at ports of entry will be made the excuse for increases in retail prices for greater than the increase in the duty and will in the end be reflected in the cost of medical, surgical and hospital care."

Other matters discussed in that part of the report of the Board of Trustees devoted to the activities of the Bureau of Legal Medicine and Legislation were the tendency on the part of State Legislatures to add to the liabilities and duties of physicians, the increased activities of cultists in an effort to compel their admission into nonsectarian hospitals, and defense against unjust malpractice claims.

BUREAU OF HEALTH AND PUBLIC INSTRUCTION

The general correspondence of the Bureau of Health and Public Instruction, which represents an important part of the work of this Bureau, was materially increased during 1929. More than 4,000 inquiries concerning one therapeutic product were received by the Bureau during the year, a fact which shows the increasing interest of the public in matters pertaining to health and the constantly growing use of the services of the Bureau. Answers to more than 300 questions submitted to *Hygeia* were provided by the Bureau.

Three hundred and two radio health talks were delivered over Station WBBM, which elicited far greater response from radio listeners than in any previous year and resulted in bringing to the Association many inquiries and requests for printed material. Many of the radio talks delivered under the auspices of the Bureau have been mimeographed and copies made available for the use of component county medical societies.

The Director and Assistant Director of the Bureau of Health and Public Instruction delivered addresses before twelve important lay organizations in five different States, and exhibits of educational material were made during the year at the meetings of nine State medical societies and at many meetings of other medical societies and important professional and lay organizations.

During the year more than 155,000 copies of pamphlets and posters of the Bureau were distributed.

Efforts have been continued to popularize the periodic examination of apparently healthy persons, and approximately 75,000 of the forms used in recording the observations in periodic health examinations were sent out by the Bureau.

The Assistant Director of the Bureau devoted a considerable part of his time during

the year to the collection and compilation of statistics dealing with the capital investment in medicine and the income of physicians. The response from the profession generally has not been large enough to make it possible to arrive at representative figures concerning either the investment required in medical practice or the income of physicians, but the work is being carried on in the hope that dependable information may be secured.

The Association, through the Bureau of Health and Public Instruction, has continued its cooperation with the National Education Association, the National Congress of Parents and Teachers and other important bodies.

BUILDING AND EQUIPMENT

The Board of Trustees reported to the House of Delegates that it is successfully proceeding with its plans for providing new and enlarged housing facilities in Chicago. At the time the report was submitted, negotiations were proceeding for the purchase of the property needed in addition to that which has already been secured.

In the meantime, the building now occupied has been maintained in the best possible condition and has been utilized to the best possible advantage, although it is inadequate to serve the needs of the Association.

Necessary additions have been made to mechanical equipment, including a large rotary press purchased at the cost of about $70,000. Necessary replacements and additions to mechanical equipment will involve further expenditures of considerable amounts in the near future.

SCOPE OF THE ASSOCIATION'S WORK

Apparently many members do not have any genuine appreciation of the scope of the work of the Association. Many seem to be unaware that any activities are engaged in except those necessary for the production of *The Journal*. Others appear to believe that the Association is concerned only with the publication of its various periodicals.

It was brought out in the report of the Board of Trustees that expenditures of the Councils, Bureaus and other departments of the Association were in excess of $280,000 in 1929, this having been in addition to miscellaneous charges due to costs of publication of the special journals and of the Directory, to incidental expenses involved in the conduct of the Association's business and, of course, in addition to the expense arising from the publication of *The Journal*.

The Board of Trustees urged that members and Fellows of the Association take advantage of avenues open to them for securing information concerning the work of the Association and that all members of the House of Delegates make comprehensive reports of the Proceedings of that body at the annual sessions of the constituent associations they represent.

REPORT OF THE JUDICIAL COUNCIL

The report of the Judicial Council was submitted by its Chairman, Dr. George Edward Follansbee, and showed that the amount of work confronting the Council in 1929 was unusually large and that many of the questions submitted were of a most perplexing nature, indicating that the conditions of the times are tending to produce significant changes in the relations of medicine.

The development of industrial medicine, the activities of corporations in medical fields the expansion of public health programs—especially those of unofficial agencies—the organization of so-called "hospital associations" and "cooperative diagnostic laboratories," the creation of funds and foundations concerned in some manner with medicine and public health, the workings of compensation laws, and many other factors have given rise to many new questions and have produced many perplexing problems of which final solution is not easily possible.

The Council referred in its report to concerns known as "cooperative diagnostic laboratories" in which practicing physicians participate as "members." Information available to the Council indicates that organization of these concerns is effected in such manner that control will lie in the hands of their promoters and directors and that practicing physicians identified with them must pay for "membership." These physicians are then expected to refer work to laboratories operated by the concern and, as a consideration for such reference, receive compensation varying in amount with the amount of work referred. The Judicial Council expressed the opinion that schemes of this kind are unethical and directly opposed to the interests of scientific medicine and of the public.

The Judicial Council reported that it is constantly being asked to deal with matters over which it has no jurisdiction until they

have come before the Council on appeal from decisions of the proper official bodies of constituent medical associations. It was brought out that original jurisdiction over the acts and professional relations of members lies with the component county medical societies, and it is the duty of these societies to institute and carry out corrective measures that may be indicated. Constituent State medical associations, from which component county medical societies receive their charters, have original jurisdiction over the officers of medical organization in the several States, and the powers and duties of the State associations are clearly fixed in their constitutions and by-laws to which component county medical societies must subscribe. It is highly important and necessary to the efficient working of our scheme of organization that every unit shall fully assume the jurisdiction that belongs to it and shall deal promptly and definitely, but with careful deliberation, with every situation that threatens to bring reproach on the profession or that offers opportunity to extend the worthy influence of organized medicine and to promote the science and art of medicine.

The Judicial Council emphasized the need for the proper preparation of charges and appeals, stressing the fact that organization law is written with proper regard for the rights and privileges of the individual as well as for those of the profession and the public. The Council proposed that the By-Laws of the American Medical Association be amended so as to provide that no person who is not a Doctor of Medicine shall be permitted to become a Fellow of the Association.

At the Portland Session a resolution was adopted by the House of Delegates requesting the Judicial Council to submit to the House of Delegates in 1930 "a comprehensive statement for the guidance of the American Medical Association concerning the practice of medicine by corporations, by clinics, by philanthropic organizations, by industrial organizations, by demonstrations and by similar organizations, and concerning the relationship of physicians thereto." The Council reported to the House that the scope of this resolution was so broad and the magnitude of the task assigned so great that it had been found impossible to comply with the request that a comprehensive report be submitted at the Detroit session, but that the Council had sought to gather information and secure expressions of opinion from qualified persons and had found that to carry out the intent of the resolution it would be necessary to compile and digest a mass of information of such size that accomplishment of the task is far beyond the capacity of the facilities of the Council. It was brought out that some conditions requiring study have been so lately created and are undergoing such rapid changes that quick appraisals cannot be made. Others now have purely local bearing and no present national significance but may come to be of important interest to the entire profession. With respect to some of the matters covered by the resolution, the Council found that there had been no crystallization of opinion and expressed a doubt that well considered judgment can be formulated. It was urged that component county medical societies and constituent State medical associations study closely conditions existing in their respective jurisdictions and that they be guided in offering or withholding approval and cooperation in movements affecting medicine by conclusions based on such studies.

With regard to the practice of medicine by corporations, the Council voiced its opinion based on present evidence, that such practice is detrimental to the best interests of scientific medicine and of the people themselves. "When medical service is made impersonal, when the humanities of medicine are removed, when the coldness and automaticity of the machine are substituted for the humane interest inherent in individual service and the professional and scientific independence of the individual physician, the greatest incentive to scientific improvement will be destroyed and the public will be poorly served."

REPORT OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

The Council on Medical Education and Hospitals reported that two new medical schools are in process of organization; one, the University of Southern California School of Medicine, opened in the fall of 1928, and the other, the School of Medicine of the Duke University at Durham, North Carolina.

The statistics compiled by the Council which appeared in *The Journal* for March 29, 1930, were referred to in the report of the Council, and the most significant and noteworthy points were recited as follows:

(a) The more complete and valuable information made available in regard to hospitals.

(b) The clearer outlook over all hospitals whereby the Council's work can be directed toward those in greater need of investigation.

(c) A gradual coordination between hospitals furnishing training for interns and those providing opportunities for residencies in the several special fields.

The Council reported that it had been engaged in an investigation of smaller hospitals, in compliance with suggestions made by the House of Delegates at the Portland Session, and that an investigation of laboratories of radiology is now under way.

A resume of the work of the Council on Medical Education and Hospitals since its creation in 1904 was included in the report to the House of Delegates, which showed the progress registered in a quarter of a century of intensive work.

The adoption of the continuous method of medical instruction whereby a student can complete the required four years of college education of eight or nine months each in three calendar years is being attempted in eight medical schools. Statistics heretofore presented by the Council have shown the average age of students graduating to be 26½ years—or 27½ years counting the internship—and the Council expressed the opinion that any method that can reduce this maximum age would be a move in the right direction.

The Council reported on a resolution referred to it at the Portland Session requesting that an investigation be made of the present teaching of obstetrics in the United States and that the Council make such recommendations for increasing the clinical teaching hours of obstetrics as might be warranted by the results of its investigations. The opinion was expressed that the teaching of obstetrics in medical schools has been tremendously improved since 1905, this opinion being based on the following facts:

1. Announcements of medical schools show that all medical schools offering four years of instruction have regular staffs for the teaching of obstetrics.

2. The time devoted to the teaching of obstetrics on the average compares favorably with the time devoted to the teaching of surgery.

3. In the "model curriculum" formulated in 1909 by the Committee of One Hundred, acting under the auspices of the Council on Medical Education, 650 hours was assigned to obstetrics as compared with 680 hours for surgery.

4. In the several complete tours of inspection of all medical schools, their rating in class A, B or C depended, among other things, on the provision made by each school for instruction in obstetrics by means of (a) lectures or recitations (b) the examination of patients in prenatal clinics (c) the witnessing of the delivery of patients in demonstration clinics, and (d) the provision of opportunities of students to deliver maternity patients personally under supervision.

5. Not only have the Council's requirements been well met in the medical schools, but increasing numbers of maternity patients have become available whereby the recent graduates have been enabled to care personally for larger numbers of patients.

6. Even with the great improvements secured since 1900, efforts for further improvement have not been relaxed. In the Council's recent conference, for example, a special symposium on the teaching of obstetrics was arranged, in furtherance of Dr. Bloss' resolution.

The Council reported that in certain institutions students are being assigned to approved preceptors who are in position to provide such students with suitable hospital, laboratory and library facilities for effective work. The Council reported that while it considered this to be an interesting experiment in medical education, it did not feel that an opinion with regard to its value could be expressed until more time had elapsed and a larger experience had been acquired.

COUNCIL ON MEDICAL ECONOMICS

Dr. J. B. Harris, California, submitted resolutions from the California Medical Association providing that the American Medical Association should establish a Council on Medical Economics. This resolution, together with the recommendation of the President providing that a Bureau of Medical Economics be established, was referred to the Reference Committee on Reports of Officers. This Reference Committee recommended "that the Board of Trustees put the principle into effect by the creation of a Bureau of Medical Economics to function under the direction of the said Board." The recommendation of the Reference Committee was adopted.

STANDARDIZATION OF HOSPITALS

Dr. E. P. Sloan, Illinois, offered resolutions commending the Council on Medical Education and Hospitals for the work already accomplished and urging the Council to continue its work and to increase its activities in the field of hospital inspection and standardization.

On recommendation of the Reference Committee on Medical Education, the resolutions submitted by Dr. Sloan were adopted.

ACTION ON SECRETARY'S REPORT

The Reference Committee on Reports of the Board of Trustees and Secretary reported as follows on the report of the Secretary:

We endorse the sentiment expressed in the report of our secretary in which he recommends a more active and aggressive program on the part of component medical societies, stressing the necessity for unified action on the part of the medical profession as being essential in maintaining leadership in all questions pertaining to health matters. Also, the importance of establishing and maintaining the hearty cooperation of both the State and the county organizations through the agency of their respective public relation committees.

We recognize the changing method in medical practice; however, we earnestly urge a realization of the necessity of maintaining the personal relationship between physician and patient, and oppose any attempt on the part of any well meaning but misinformed and misguided individuals or organizations in their efforts to apply "mass production" methods to the practice of medicine.

We approve that portion of the report advocating the education of the public in all matters pertaining to health and disease.

We concur with the idea expressed that the medical profession has been too reticent and conservative in taking a position of active leadership in health activities, particularly with reference to the education of the public along these lines.

We believe that it would be a decided aid to organized medicine if the members of the House of Delegates would avail themselves of the opportunity of attending the annual conference of the State secretaries.

This report of the Reference Committee was adopted by the House of Delegates.

ACTION ON REPORT OF BOARD OF TRUSTEES

The report of the Reference Committee on the report of the Board of Trustees, which was adopted by the House of Delegates, was as follows:

We heartily commend the Board of Trustees for the financial showing made, as exemplified by the auditor's report for the past year. A review of the report emphasizes the wisdom of the action of the house in authorizing the increase in the subscription price of The Journal to meet the demands of the increased Association activities.

We are gratified by the position of The Journal as the leader of medical publications, as well as the special journals in their respective fields.

We believe that Hygeia has a place in every physician's waiting room and the attention of Fellows should be called to this fact.

We emphasize the value of the library and commend its more general use.

We endorse the work of the various councils for the past year as detailed in this report.

We especially commend the work of the Bureau of Legal Medicine and Legislation with reference to national legislation in connection with the narcotic bill and the Sheppard-Towner Maternity and Infancy Act.

We approve of that part of the report with reference to the World War Veteran's Act wherein attention is called to the viciousness of this proposed legislation, and we recommend that this House of Delegates go on record as being opposed to the federal government giving all medical and surgical care to veterans suffering from injury or disease that is not service connected.

We recommend the methods employed by the Bureau of Legal Medicine and Legislation and urge close cooperation of the various State legislative committees with this bureau.

We approve of the educational campaign that has been inaugurated by the Bureau of Health and Public Instruction and recommend a continuation of the cooperative policy with the National Educational Association and National Congress of Parents and Teachers.

The value and importance of the Annual Scientific Exhibit cannot be overestimated, and we recommend that it be continued and expanded from year to year.

The Trustee's report as a whole reflects decided progress in the Association's affairs. Your committee desires to express its realization of the immense amount of work entailed and its appreciation of their worth-while labors in connection therewith.

COMMUNICATION TO THE AMERICAN LEGION

On motion of Dr. Donald Macrae, Jr., Iowa, the Speaker of the House of Delegates and the Secretary of the Association were instructed to send a communication to the American Legion presenting the official attitude of the Association with respect to legislation providing for medical, surgical and hospital care by the federal government for veterans suffering from injury or disease that is not service connected.

AMENDMENTS TO BY-LAWS

The Reference Committee on Amendments to the Constitution and By-Laws recommended that Chapter XI, Section 2, of the By-Laws be amended as suggested in the report of the Judicial Council to read:

Any member of this Association holding a degree equal in requirement to that of M. D. granted by a school of medicine recognized by the American Medical Association entitling the holder to apply to a State board of medical examiners and registration for license to practice medicine, and who on the prescribed form shall apply for Fellowship and subscribe for The Journal, paying the annual Fellowship dues for the current year, shall be inducted into the Association as a Fellow unless the application is disapproved by the Judicial Council.

This amendment was adopted by the House of Delegates and is intended to serve the pur-

pose indicated in the report of the Judicial Council, namely, to exclude from Fellowship all persons except those holding the degree of Doctor of Medicine or its equivalent.

On recommendation of the Reference Committee on Amendments to the Constitution and By-Laws, Chapter XI, Section 12, of the By-Laws was amended to apply only to members of the Association. The effect of this amendment is that the House of Delegates shall have power to discipline or expel a member of the Association on recommendation of the Judicial Council.

CARE OF VETERANS

The following resolutions offered by the Board of Trustees were adopted by the House of Delegates and a copy sent immediately to the President of the United States:

RESOLVED, That, in the opinion of the House of Delegates of the American Medical Association, legislation to extend in point of time the presumption of service origin of diseases and injuries from which veterans are suffering, to establish arbitrarily the service origin of such diseases and injuries, and to extend greatly the category of such diseases, is without sound basis in the science and act of medicine;

RESOLVED, That the provisions of such legislation to the effect that lay evidence as to the nature and extent of diseases and injuries is to be given added consideration will give to such evidence weight to which it is in no way entitled and cause pressure on the Veterans' Bureau to allow claims for compensation without adequate medical support;

RESOLVED, That legislation recently enacted providing for the enlargement of the hospital facilities at the command of the Veterans' Bureau for the care of veterans, rich and poor, who desire hospitalization and treatment for diseases and injuries that admittedly have no relation whatever to military service is unsound and communistic in character, and the pending proposal to allow such veterans as are of financially limited means bonuses and money to add to their own comforts while they are in the hospital and to help support their families during that period and for limited periods thereafter is calculated to induce patients to seek hospital care through the Veterans' Bureau when such patients should be better and more economically treated as ambulant patients or treated in their own homes;

RESOLVED, That the duty of providing medical and hospital care and financial relief for indigent citizens of any State, when disabled by diseases and injuries that did not originate in the line of military duty, is a function not of the federal government, but of the governments of the several States and should be discharged through State agencies, including permanently established State, county, municipal and private hospitals; and

RESOLVED, Further, that a copy of these resolutions be sent to the President of the United States.

REPORT OF COMMITTEE ON MILITARY AFFAIRS AND NATIONAL DEFENSE

GENTLEMEN:

We, your Committee on Military Affairs and National Defense, beg leave to present our first annual report, as follows:

Our committee has been created since the last annual session of the American Medical Association. It has, therefore, not had an opportunity to organize for the purpose for which it was created and to lay out a course of procedure of anything like a promising sort. There has been much correspondence, however, between the members of the committee and, as well, the Surgeon Generals of the Army, the Navy and the United States Public Health Service, and there are one or two matters that appear to us to be clear at this time, to which we may properly call attention.

This committee was created in response to a resolution providing for such a committee for the purpose of receiving "all matters pertaining to national defense and military preparedness." There has been nothing referred to the committee officially, but it is our opinion that we have a certain degree of initiative; hence the recommendations we are about to make.

It will be recalled by many that when the great emergency came upon us in 1916 we were, as a nation, wholly and totally unprepared for war. The fact that we attained to a reasonable degree of preparedness within the astonishingly short period of a year is beside the point. The fact remains that we were not ready, and had it not been for the further fact that the enemy was deadlocked with other forces, the story would have been much sadder and certainly very different. If any group of our citizenship was in any way partially prepared and in the process of being prepared, it was the medical profession; yet who among those of us that participated in that supreme effort does not shudder when he thinks of the chaotic conditions that obtained? One of the purposes of our committee will be eventually to bring to the attention of the medical profession of this country in the most impressive and persuasive way possible a true picture of the state of affairs existing at that time, together with recommendations which, the committee hopes if carried out, will help to prevent a repetition of the confusion, uncertainty and lost motion of those days. That we weathered the storm then is incident to the fact that great minds were in charge. Had those minds been applied to the problem earlier than they were, and had their plans received sufficient support, certainly conditions would have been improved and the very necessary medical and surgical service would have been more immediately available to our combantant and other governmental forces.

It is appreciated by our committee that, since the days of the World War, much has been accomplished by way of preparedness, including better and more definite laws, particularly as pertain to national defense proper, and a better and more complete organization of the armed and public health forces of the country. Even so, unless the medical profession prepares to take its place in the scheme of things, much of success will be lacking until much precious time has elapsed following the onset of a great national emergency.

In the meantime, our committee recommends that the situation as briefly outlined here be called to the attention of the profession at large, and that each of our constituent State associa-

tions be requested to appoint a State committee on "Military Affairs and National Defense," with much the same purposes as relate to the States as the American Medical Association committee has for its existence, all committees to work together in developing national medical preparedness.

Respectfully submitted,

Holman Taylor, Chairman,
F. B. Lund,
E. A. Meyerding,
F. K. Boland.

The House of Delegates adopted the report of this Committee.

RADIO BROADCASTING

The following resolution, offered by Dr. Charles E. Humiston, Illinois, was adopted by the House of Delegates on recommendation of the Reference Committee on Legislation and Public Relations:

WHEREAS, Licenses issued by the Federal Radio Commission to broadcast have frequently been used as authority for disseminating false, misleading, pernicious and even obscene statements concerning matters of health, not for the benefit of the public, but solely for the promotion of the selfish interests of the proprietor of the broadcasting station:

RESOLVED, That the House of Delegates of the American Medical Association, recognizing the legal prohibition on the censorship of radio programs, urges on the Federal Radio Commission the necessity for extreme care in the character and qualifications of persons and corporations desiring to broadcast medical programs and a liberal construction in favor of the public of the law authorizing the revocation of licenses that are against public interest.

PSYCHIATRIC SERVICE IN CRIMINAL COURTS

The following resolutions, offered by Dr. T. B. Throckmorton, delegate from the Section on Nervous and Mental Diseases, were adopted:

RESOLVED, That the Section on Nervous and Mental Diseases hereby declares its adherence to the principles stated in the Report of the Committee on Psychiatric Jurisprudence, Section on Criminal Law and Criminology, American Bar Association, and approved by that association at its meeting held in Memphis, Tenn., Oct. 24, 1929, namely:

"1. That there be available to every criminal and juvenile court a psychiatric service to assist the court in the disposition of offenders.

"2. That no criminal be sentenced for any felony in any case in which the judge has any discretion as to the sentence until there be filed as a part of the record a psychiatric report.

"3. That there be a psychiatric service available to every penal and correctional institution.

"4. That there be a psychiatric report on every prisoner convicted of a felony before he is released.

"5. That there be established in each State a complete system of administrative transfer and parole, and that there be no decision for or against any parole or any transfer from one institution to another, without a psychiatric report."

RESOLVED, Further, that the section recommends that the House of Delegates of the American Medical Association adopt the principles stated above and request the Board of Trustees to take such action as may be necessary to bring about the cooperation of State and county medical associations with corresponding State and local bar associations in securing, as far as possible, the adoption of these principles in practice.

MENTAL HYGIENE

The following resolution, offered by Dr. Tom B. Throckmorton, delegate from the Section on Nervous and Mental Diseases, was adopted:

WHEREAS, The problem of the mental disorders and defectives and the mental health of the country constitute one of the most serious situations with which scientific medicine is at this time concerned, and

WHEREAS, The hospitalization and care of an increasing number of mental disorders and defectives constitute one of the most difficult economic situations affecting the medical profession, and

WHEREAS, There is in the organization of the American Medical Association no regularly constituted committee or body especially concerned with this problem; therefore be it

RESOLVED, By the Section on Nervous and Mental Diseases of the American Medical Association that it recommend to the House of Delegates that the Board of Trustees of the American Medical Association be authorized to appoint a special committee of five Fellows of the Association especially interested in these problems with a view to an investigation of the situation and to making a report to the Board of Trustees on the manner in which the Association can be of service in the solution of these problems.

INVESTIGATION OF HOSPITALS FOR MENTAL PATIENTS

The delegate from the Section on Nervous and Mental Diseases submitted the following resolution, which was adopted:

WHEREAS, There has been no fixed policy of the American Medical Association toward the handling of the institutional public in the insane hospitals of the country; and

WHEREAS, There is a growing consciousness of the need for a better understanding of the problems of these institutions especially as regards their medical personnel; therefore be it

RESOLVED, That the Council on Medical Education and Hospitals be requested to make a thorough investigation of all hospitals caring for mental patients within the next one or two years whereby a more accurate knowledge of the situation may be obtained and the need of further developments in the field be pointed out.

ELECTION OF OFFICERS

The following officers and members of Councils were elected by the House of Delegates:

President-Elect—E. Starr Judd, Rochester, Minn.

Vice-President—Louis J. Hirschman, Detroit.

Secretary—Olin West, Chicago.

Treasurer—Austin A. Hayden, Chicago.

Speaker of the House of Delegates—F. C. Warnshuis, Grand Rapids, Mich.

Vice Speaker of the House of Delegates—Albert E. Bulson, Ft. Wayne, Ind.

Trustee—Thomas S. Cullen, Baltimore.

Trustee—Joseph A. Petit, Portland, Ore.

Trustee—J. H. J. Upham, Columbus, Ohio.

Member, Judicial Council—George Edward Follansbee, Cleveland.

Member, Council on Medical Education and Hospitals—Charles E. Humiston, Chicago.

Member, Council on Scientific Assembly—Frank Smithies, Chicago.

Philadelphia was selected as the next place of meeting.

Respectfully submitted,

E. F. Ellis, Fayetteville,
Wm. R. Bathurst, Little Rock,
Delegates.

Abstract

WHOOPING COUGH

Louis W. Sauer and Leonora Hambrecht, Evanston, Ill. (Journal A. M. A., July 26, 1930), assert that the cough plate is the best means of early diagnosis. The disease can now be diagnosed before the lymphocytosis and whoop. It is early in the disease that a correct diagnosis is most important, because it is then that the pertussis bacillus is present in greatest numbers. In fact, it is seldom found after the whoop is well established. They have used this aid since the late summer of 1925. An analysis of 200 cases seen in private practice shows that the plate was positive in all but one of fifty-three patients in the catarrhal stage; in seventy of 107 in the paraxysmal stage (65 per cent) and in none of forty in the decline period. These figures are in accord with those of the originators and of others who have reported on this method. They describe the medium used for the cough plate. Proper exposure of the plate is of the greatest importance. Superficial coughs or pharyngeal coughs provoked by dry foods are not desirable, as such plates are usually overgrown with saprophytes and seldom contain the pertussis bacillus. The cough desired is one of the expulsive type, from the bronchi rather than the throat, since the site of the lesion is in the lower air passages. The uncovered plate is held 3 or 4 inches from the mouth at the moment of several deep, expulsive coughs. If a voluntary cough cannot be elicited, repeated touching of the larynx or posterior wall of the pharynx, external pressure on the larynx or trachea, the drinking of cold water, or laughing, running or crying may provoke the deep cough. A rather forceful strike between the scapulae with the palm of the hand at the beginning of a cough may prove an aid. Plates should be incubated in an inverted position within a few hours after exposure. A few drops of water placed at the center of the cover is helpful if the surface of the medium appears dry. Colonies which spread rapidly, such as *B. subtilis*, *B. mycoides* and molds, should be cut out as soon as detected. Plates exposed relatively late in the disease are seldom positive. A poorly exposed plate should not be incubated. A negative plate does not exclude whooping cough. The two most frequent pitfalls encountered are that plates are not well enough coughed on and that they are exposed too late in the disease. The incubated plate should be examined for colonies of *B. pertussis* at the end of the second day. If the colonies are very numerous, they may be seen as minute, glistening, mercury-like droplets amid the larger saprophytic colonies. By the end of the third or fourth day, as a rule, they will have more than doubled in size. The colony is translucent, markedly raised and definitely circular. In size, the average well developed colony approximates 1 mm. in diameter. When viewed in reflected light a definitely darkened zone is seen to surround the whitish colony; in transmitted light this area, including the colony, appears distinctly lighter than the surrounding medium. This is characteristic of *B. pertussis*. The width of this zone may exceed twice the diameter of the colony. Plates which have turned very dark do not reveal these features. If the colonies are few, they may not be recognized until the fourth or even the fifth day. At times one is surprised to find these well developed colonies present in considerable numbers and wonders that their

presence was not detected on the previous day. A hand lens is helpful in the examination of plates densely seeded with saprophytic colonies. When smears of new colonies are made for microscopic examination, the organisms promptly diffuse throughout the droplet of water on the slide. Stained by Gram's method (negative) or by toluidin blue, these smears consist of small delicately staining ovoid bacilli, some of which show bipolar staining. This method of early diagnosis should not be compared with the throat culture in diphetheria. In pertussis, the lesion is not accessible and the causative organism can as a rule be isolated only early in the disease. The course of the illness is little influenced by diagnosis. The chief value of an early diagnosis is that the patient and the susceptible children whom he has exposed may be quarantined before they in turn expose others. It is by such prophylaxis that epidemics are thwarted. Early diagnosis by the health department and hospital laboratory, in cooperation with the practicing physician, elementary school, kindergarten, nursery and orphanage, will reduce the incidence and the mortality.

Personal and News Items

Dr. L. N. Bollmeier of Malvern has moved to Mountain Pine.

Dr. S. B. Hinkle has returned from an extended vacation in California.

Dr. and Mrs. D. A. Rhinehart have returned from a vacation spent in Indiana.

Dr. J. P. Sheriff of Pine Bluff was a recent visitor to Little Rock.

Dr. W. E. Matherly of Little Rock has moved to Harrison.

Dr. J. T. Polk of Keiser has moved to Forrest City.

Dr. D. K. McCurry of Alpena Pass has moved to Green Forest.

Dr. Henry Thibault has returned to his home in Scott after spending some time in Arizona.

Dr. Porter R. Rodgers of Little Rock has located in Searcy and will be associated with Dr. A. G. Harrison.

We regret to announce the death of Mrs. Patterson, wife of Dr. R. Q. Patterson of Little Rock, July 24.

Dr. Paul H. Power of Pine Bluff and Dr. R. T. Henry of Springdale were recent visitors in Little Rock.

The White County Medical Society held its July meeting at Pangburn. Dr. C. M. Peeler, President of the Society, and Mrs. Peeler entertained with a dinner at the Hotel Leota.

We have been informed of the death of Mrs. Margaret Rogers Mock of Prairie Grove, mother of Dr. Will H. Mock, July 28. We wish to extend our sympathy to Dr. Mock in his bereavement.

Dr. C. J. March of Fordyce was ommitted from the list of those having attended the meeting of the American Medical Association in Detroit, June 24-27. We wish now to make this correction.

Dr. Leonard R. Ellis of Hot Springs was elected to the office of grand esteemed loyal knight of the Benevolent and Protective Order of Elks at the 66th annual reunion of the Grand Lodge, held in Atlantic City, July 9.

Dr. and Mrs. H. Fay H. Jones of Little Rock have returned from an extensive trip through the West. They visited Canada, Alaska, California, and Yellowstone National Park.

Dr. W. H. Poynor of Harrison, accompanied by his brother, Dr. E. E. Poynor of Stilwell, Okla. spent the month of July touring the West. Dr. Poynor reported a wonderful trip.

It is with the deepest regret that the Auxiliary to the Pulaski County Medical Society records the death of two of their most valued members.

Mrs. R. Q. Patterson, wife of Dr. R. Q. Patterson, who passed away July 24, 1930.

Mrs. D. R. Hardeman, nee Gertrude Woodson, wife of the late Dr. D. R. Hardeman, on July 26, 1930.

ANNOUNCEMENT OF COURSES IN OPERATIVE SURGERY, DIABETES AND CANCER

By

University of Arkansas School of Medicine
August 25-30, 1930

The University of Arkansas School of Medicine announces an intensive course in dog surgery, in which intestinal surgical technique is demonstrated, to be given by Dr. Randolph Smith. A course in modern treatment of diabetes mellitus and hypertension, by Dr. S. C. Fulmer. A course in cancer-pathology and treatment, by Dr. Dewell Gann, Jr.

A fee of $10.00 will be charged for each course, or $30.00 for the three courses. Each course will be so arranged that they do not conflict in order that the three may be taken. The course in operative surgery is limited to nine; other courses not limited.

Address communications to

DEAN FRANK VINSONHALER, University of Arkansas, School of Medicine, Little Rock, Arkansas.

Obituary

BOWERS, AUSTIN L.—Dr. A. L. Bowers of Keo died June 18, 1930. Aged 54. He was well-known as a physician and also planter of Lonoke County.

Surviving are his wife, a son, John R. Bowers, both of Keo; his parents, Mr. and Mrs. John Bowers of Jacksonville, and two brothers and two sisters.

County Societies

ARKANSAS COUNTY

(Reported by E. B. Swindler, Sec.)

The July meeting was held at DeWitt on the 15th, having been postponed from the regular second Tuesday. Present: Drennen, Park, Dickens, Lowe, Neighbors, Rascoe, Whitehead and Swindler.

The program was as follows:

Diarrheas of Infancy—C. E. Park.

Management of Pregnancy—Homer Dickens.

Tannic Acid Treatment of Burns—J. E. Neighbors.

CRAIGHEAD-POINSETT COUNTIES

(Reported by Thad Cothern, Sec.)

The Craighead-Poinsett Medical Society met at Cash, Thursday afternoon, July 24, 1930, with Dr. McCurry of Cash as host. The meeting was called to order by the Councilor, Dr. W. W. Verser, the president and vice-president both being absent.

Among those present were: Drs. Scott, Finch, Henderson, Cothern, Haltom and wife, Jernigan and family, Stroud and son, Lile and Jarman of Jonesboro; Bates of Lake City; Burge of Nettleton; Hunn and sons, Verser and son of Harrisburg; Montell of Cole Corner, McCurry and Nunn of Cash; Elton and Carrol of Newport.

Dr. A. G. Scott read a paper on "Foreign Bodies In the Throat." This paper elicited a general discussion.

Dr. J. T. Hunn presented a patient for clinical study. The patient had had an attack of encephalitis some five years previous, and the recovery was striking and very interesting.

At five o'clock, dinner was served, which consisted of a bountiful supply of fish and squirrel.

After the dinner, Mr. John Jarman, guest of Dr. Lile, was called upon for a talk, to which he responded with well chosen words.

A vote of appreciation was extended Dr. and Mrs. McCurry for the wonderful entertainment given the society.

Book Reviews

Outline of Preventive Medicine.—For Medical Practitioners and Students. Prepared Under the Auspices of The Committee on Public Health Relations, New York Academy of Medicine. 21 Contributions. Editorial Committee: Frederic E. Sondern, Chas. Gordon Heyd, E. H. L. Corwin. Published by Paul B. Hoeber, Inc., New York. Price, $5.00.

The plan devised by this group of authors is to present definitely and comprehensively a publication never heretofore issued and greatly to be desired.

The first chapter is by Dr. Harlon Brooks, on "The Periodic Health Examinations." Twenty other chapters by twenty different authors.

Temperance or Prohibition? The Hearst Temperance contest Committee. By Francis T. Tietsort, Editor, 220 South Street, New York, 1929.

This book is based on the data provided by the Hearst $25,000.00 Temperance Contest of 1929. The object being to offer a plan which will promote temperance and which will reestablish respect for the law. It is a very startling and informing treatise.

In the foreword is a statement by Mr. William Randolph Hearst, giving his reasons for being against prohibition.

Blood and Urine Chemistry.—By R. B. H. Gradwohl, M. D., Director of the Gradwohl Laboratories St. Louis, Mo., and Ida E. Gradwohl, A. B., Instructor in the Gradwohl School of Laboratory Technic, St. Louis, Mo. 117 illustrations and 4 color plates. Published by The C. V. Mosby Company, St. Louis, Mo. Price $10.00.

This volume is of equal value for all practitioners of medicine and laboratory workers. The technic is in the simplest style, the calculations in the proper form, and a full explanation of the apparatus required in these tests.

Health Essays—By Horace W. Soper, M. D. Published by Richard G. Badger, Boston.

This collection of interesting, well-written and very entertaining short articles was prepared under the direction of the Gorgas Memorial Institute. The table of contents is as follows: Exercise, Under-Nutrition, Over-Nutrition, The Prevention of Colds, Grippe and Flu, Tobacco, Alcohol, Diarrhea, Constipation and Health Paragraphs.

Diagnostic Methods and Interpretations in Internal Medicine—By Samuel A. Lowenberg, M. D., F. A. C. P., Assistant Professor of Clinical Medicine, Jefferson Medical College; Assistant Physician to the Jefferson Hospital. With 547 illustrations, some in colors. Published by F. A. Davis Company, Philadelphia. Price $10.00 net.

Few books have been written of greater interest to the medical profession than the one described above by Dr. Locuberg. It covers the field of diagnostics in internal medicine. It gives instructions on the various methods of examining the patient, descriptions of normal findings, enumeration of pathologic conditions with the normal, and pathologic physical signs, and the reasons for such signs.

Medical State Board Questions and Answers—By R. Max Goepp, M. D., Professor of Clinical Medicine in the Graduate School of Medicine, University of Pennsylvania. Sixth Edition, Thoroughly Revised. Octavo volume of 754 pages. Published by W. B. Saunders Company. Cloth, $6.00 net.

This book has been made popular by the demand for a convenient compend for the use of those who wish to prepare themselves for State Board examinations.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1928—Volume XX. Edited by Mrs. M. H. Mellish, Richard M. Hewitt, M. D., and Mildred A. Felker, B. S. Octavo volume of 1197 pages with 288 illustrations. Published by W. B. Saunders Co., Philadelphia. Cloth, $13.00 Net.

In all medical literature there is probably no other book with so rich a clinical background. In this volume we find 52 articles on the alimentary tract—52 sources of ideas on a region that causes much complaint; 22 on the urogenital organs; 6 on the skin and syphilis; 13 on the ductless glands; 20 on the blood and circulatory organs; 10 on the head, trunk and extremities; 11 on the chest; 15 on the brain, spinal cord and nerves; 13 on technic; and 20 miscellaneous articles—a wealth of original thought!

The Surgical Clinics of North America—(Issued serially, one number every other month.) Volume 9, number 4. (Mayo Clinic Number, August, 1929), 208 pages with 72 illustrations. Per clinic year (February, 1929 to December, 1929). Paper $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

This number is composed of 24 interesting surgical cases from the Mayo Clinic. The first by E. Star Judd and Herman J. Moersch on "Pharyngo-Esophageal Diverticulum." The diagnosis of its presence, Dr. Judd says, is made erroneously probably more frequently than that of any other disease of the esophagus. Conditions with which it may be confused are: Cardiospasm, bulbar palsy, carcinoma, cicatricial stricture of the esophagus, globus hystericus, and functional and hysterical dysphagia. Points of error are given in the article.

Abstracts

THYROTOXICOSIS IN ELDERLY PERSONS WITHOUT SIGNS OF GOITER

Hugo A. Freund and Warren B. Cooksey, Detroit (Journal A. M. A., June 14, 1930) report five cases and call attention to the fact that primary hyperthyroidism frequently occurs in elderly persons without visible or palpable goiter. These patients more often present symptoms referable to the gastro-intestinal tract as their initial complaint. The usual signs of exophthalmic goiter are generally obscure. Compound solution of iodine promptly controls and terminates the vomiting, which in one instance had persisted for four weeks without relief. Subtotal thyroidectomy is often necessary. Prolonged preliminary treatment, however, is essential to prepare these patients for operation. Their response to treatment is striking and progressive, materially improving their chances for recovery from operation. In the two cases that came to operation, intensive preliminary treatment did not prove adequate. In three cases the continued use of iodine solution with only slight periods of interruption has succeeded in arresting the hyperthyroidism. Its prolonged administration in these cases has not produced ill effects. Its continued administration is apparently essential to maintain the patient's sense of well doing.

STAPHYLOCOCCUS TOXIN IN TREATMENT OF FURUNCULOSIS

The skin-necrotizing toxin produced by Staphylococcus aureus was employed by Ellwood C. Weise, Bridgeport, Conn. (Journal A. M. A., Aug. 2, 1930), in the treatment of chronic furunculosis. The toxin preparations for the treatment were diluted with physiologic solution of sodium chloride in proportions of 1:2, 1:5, 1:10 and 1:20 and 0.5 per cent phenol was added to the diluted toxin. Hypodermic injections of the diluted toxin were given at intervals of about a week. On account of irregularity in attendance of the patients it was impossible to adhere to an exact schedule. The initial dose was 0.5 cc. of the 1:20 dilution (about 2½ units). The amount was gradually increased at each following visit provided no marked local reaction was reported from the preceding injection. When well borne the dose was worked up to 1 cc. of a 1:2 dilution (about 50 units). Whenever possible ten injections were given, and in resistant cases a still longer course. The first injections usually did not cause any reaction. Later injections were often followed in from six to twelve hours by local redness and tenderness and occasionally by swelling. In one case the injection of undiluted toxin caused intense inflammation and suppuration with marked systemic symptoms. This makes it seem advisable never to use undiluted toxin. In the present series, no other severe reactions occurred. Of the twenty-four patients treated nineteen ceased to have furuncles and several of these who could be followed from three months to two years remained free. Diabetes was present in two of the five cases that did not clear up completely, which doubtless accounts for their failure to respond. The other cases showed either a marked decrease in the severity of the boils or a great lengthening of the intervals between their occurrence. These results seem remarkably good.

SUPPURATION IN PARANASAL SINUSES AS FACTOR IN FOCAL INFECTION

In a review of the histories of 400 cases made by Carl M. Anderson, Rochester, Minn. (Journal A. M. A., June 14, 1930), sinusitis was not a factor in focal infection. Teeth, tonsils, the prostate gland, and other foci are of more importance. Suppurative sinusitis may be a focus of infection on rare occasions. In a patient with a nose normal on clinical examination, and with a history negative for diseases that can be referred to the nose, any exploration which involves mutilation of the nasal membranes is not justified. Unnecessary trauma reduces the resistance of the membrane and may introduce infection. Toxins are absorbed by the blood stream, but bacteria are rarely transmitted to distant parts of the body from the paranasal sinuses. Existing infection of the nose and paranasal sinuses should be treated in the most conservative manner consistent with the complete eradication of the disease.

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Original Articles

THE TREATMENT OF BONE INFECTIONS BY THE METHOD OF LEOPOLD OLLIER*

ALBERT DEGROAT, M. D., Fayetteville

The article that I am presenting is not directed to the specialist in bone surgery, but the general man like myself who, on learning of a new method of treatment must wait until it has proved its value in other hands before feeling justified in employing it in his own practice.

I have in mind the treatment of osteomyelitis by rest and drainage which was introduced to this country shortly after the war by Dr. Orr of Lincoln, Nebraska. I have made this the subject of my paper not simply to show that the method is a very old one but to call your attention to its excellence as thoroughly proven by the experience of surgeons who have been employing it for over half a century.

The essential elements of the method in question were organized into a system of treatment between 1856 and 1885 by Leopold Ollier. This is one of the important contributions of Ollier to bone surgery and to throw it into relief I designate it "the method of Leopold Ollier."

A word about the author: Ollier was a student of Claude Bernard and Velpeau, hence was well grounded in the experimental method and the clinical surgery of his day. About 1855 he undertook an experimental and clinical study of bone physiology which was to continue for forty years and was to establish nearly the entire body of ideas on which bone surgery is based today. Ollier was well known to the surgeons of the last century, thus Nicholas Senn refers to "the celebrated surgeon of Lyons," but his name rarely appears in recent bibliographies. Had his work been more familiar to the surgeons who were in the war an enormous amount of frantic experimenting would have been avoided and the wounded would have been saved innumerable disasters.

Ollier's method of treating inflammatory bone lesions, whether primary or traumatic embodies the following points:

1. All operative procedures on the bones or joints are carried out entirely within the periosteum and capsule by a very specific technique.
2. The wound is thoroughly drained by whatever means is necessary to prevent the accumulation of pus.
3. The extremity is rigidly immobilized.
4. Post-operative dressings are reduced to a minimum, in fact, all but eliminated.

Before considering these points in detail it should be noted that bone infections present a very special problem because the cure of the infection is intimately bound up with bone regeneration. Furthermore, it is evident that some of the methods of combatting infection defeat their purpose by interfering with bone repair.

About 1860 Ollier showed by a series of conclusive experiments that the periosteum plays a predominate role in osteogenesis, the cortex and marrow a secondary role. Also the presence of the hypothetical osteogenic layer on the deep surface of the periosteum was seemingly proved. With the object of preserving this layer Ollier adopted an operative technique of the greatest importance, which, incidently has only recently found its way into American and English texts. In all his work he employed a very sharp periosteal elevator which was kept firmly in contact with the bone

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

throughout the operation. On this point hinged the sueeess or failure of his operations and experiments. To illustrate, early in the war the French surgeons made a practice of opening compound fractures widely, of removing loose fragments of bone subperiosteally, and establishing drainage as a prophylactie to disasterous suppuration. The results were good, relatively few cases of non-union oeeurring. Later the English attempted the same procedure and obtained an inordinate number of pseudarthroses. The difference in results is easily explained. The French habitually use a sharp periosteotome, the English a dull one.

In the light of more recent studies it appears that Ollier was wrong in theory but sound in practice. He shared the old conception that bone is the product of a specific cell, the osteoblast, in which the deep layer of the periostium was supposedly rich. When bone formed in abnormal locations the phenomenon had to be explained by a hypothetical migration of osteoblasts. These ideas are at present being rapidly abandoned. Bone represents simply a metaplasia of connective tissue which results from a combination of factors, some understood, some entirely obscure.

When a bone is fractured a hematoma forms between the fragments and rapidly becomes organized by granulation tissue. At the same time the periosteum, normally a dense fibrous membrane becomes thick and edematous, reverting to an embryomic connective tissue. While these changes are occurring the fragments rarefy and free locally an excess of calcium salts in a colloidal form which permeate the connective tissue. At this point the callus consists of a soft osteoid tissue. Now a hardening of the callus occurs, partly as a result of mechanical effects, and the bone assumes its final form. This process has been compared to the setting of plaster of Paris. Nothing has been said of the osteoblast because its role is almost entirely passive.

When a bone is resected, regeneration occurs in the same manner and here the importance of the Ollier technique becomes apparent. Because the periosteum is separated from the bone by a sharp instrument, innumerable flakes of bone remain attached to the periosteum. These flakes of bone furnish the minerals indispensable to the ossification of the connective tissue. Thus it is seen that the periosteum possesses no osteogenic function in itself but simply serves as a readily ossifiable medium.

In this light ossification becomes a complex physico-chemical phenomenon easily interfered with by local or general conditions. So it is not surprising that some of the usual methods of treating wound infections may readily disturb the delicate physical and chemical balance necessary to bone repair. Perhaps the worst offender is the irrigation treatment which probably alters by osmosis the mineral content of the connective tissue callus.

This brings us to the elements of Ollier's method that deal with the infection. Drainage is essential and the operation should be so planned that there can be no accumulation of pus in the wound. Thus in a resection of the knee or ankle posterior incisions should be added to the usual anterior ones. In an osteomyelitis the wound should be left open and packed with gauze. Ollier made extensive use of iodoform.

The favorable influence of immobilization was noted by most of the surgeons of preaseptic days. By 1867 it forms one of Ollier's cardinal principles of post-operative treatment. He speaks of the marked "dephlogisticating effect" that it has on the inflammation. The apparatus employed was the posterior plaster gutter which is still in vogue at Lyons, nothing better ever having been found. In a resection or fracture it is easily applied without displacing the bones. Also it admits free access of air which inhibits putrification of the wound secretions.

To modern surgeons the most unorthodox feature of Ollier's treatment is the practice of leaving the extremity immobilized under a single dressing for 15 to 60 days. Exactly when this feature was introduced is not clear but from case reports of the early 60's it is evident that dressings were already being reduced to a minimum. In 1871 Poncet of Lyons published an article advocating the principle and by 1885 it had become a routine in Ollier's clinic.

This method of sub-periosteal resection, immobilization, drainage and infrequent dressings possesses very obvious advantages when applied to joint resections, compound fractures and osteomyelitis. First the structures essential to regeneration are preserved, second, bone repair proceeds undisturbed; third, consolidation can be obtained under a single

dressing and the danger of altering the alinement of the bones is eliminated. Fifth the infection becomes rapidly attenuated and this attenuated infection stimulates rather than retards bone repair as Ollier demonstrated experimentally many years ago. Lastly the patient is saved an immense amount of discomfort and the surgeon an immense amount of work.

One of the most brilliant applications of Ollier's method was introduced during the war by Professor Louis Tixier of Lyons. In 1917 he presented before the French Congress of Surgery the following treatment of infected ununited fractures. Taking for example the humerus, the pseudarthrosis is exposed and drained and the arm placed in a cast which includes the thorax. This is left in place about forty days. When the cast is removed all signs of active inflammation have disappeared. The rarified ends of the fragments are now resected and a plate applied by wiring. The wound is again drained and the arm immobilized for another forty days The fracture has by this time consolidated. In a third step the plate is removed and healing of the wound follows. The results of this treatment in a large number of cases was nearly 100 per cent perfect. When handled by other methods we have all seen pseudarthroses suppurate endlessly, the muscles atrophy, the joints stiffen and an almost hopeless situation result even when union could be finally obtained.

I have taken your time with these principles of treatment which are at present receiving wide consideration simply to place them in their proper historical perspective and to further in some measure their early adoption.

DISCUSSION

DR. H. J. G. KOOBS, Rogers: During my last year in school at Northwestern in 1901, it fell to my lot to assist Dr. John B. Murphy, Professor of Surgery at Mercy Hospital at Chicago. It was during the time Dr. Murphy was particularly interested in forming new joints and in bone surgery in general, and I was interested to hear Dr. Murphy express himself as being not satisfied with the operation in vogue in the cases of osteomyelitis and he said that some day we will do this different. 1902 Dr. Nichols of Boston published a classical article on osteomyelitis in the Journal of the A. M. A., over which I became very much enthused. He advocated the peeling off of the periosteum intact in acute osteomyelitis cases, cleaning out the osteomyelitic process, preserving the bone covering and have new bone regenerate from that not waiting for involvence and sequestra to form.

During my first year in active practice there happened to come to me the case of a girl nine years old with acute osteomyelitis of the radius, well advanced, the arm swollen, with a lot of pus. I decided to try Dr. Nichols' procedure. I made a long incision, dissected out the entire radius because the entire shaft of radius was involved. I removed as much of the radius as necessary until I got clean bone. I found it was necessary to remove all of the shaft of radius involving the diaphysis and then I did something I know I wouldn't do today in the light of our experience and that is I sewed up the arm with the exception of two places left open for drainage. Here is what happened: pus continued to form and eventually I had to open it up more and I had destruction of the periosteum in various places. (Just how successful I was in the peeling off of all the periosteum, of course, I don't know.) I watched that case with the x-ray. I had isolated areas of callus or bone develop, so that I had eight or ten areas of bone regenerate separately from each other along the radial shaft. I believe if I had kept the wound wide open, I would have had better results). Eventually these fragments united until I had most of the radius regenerated. In a child of that age however a disturbed diaphysis interferes with the growth of the length of the bone and the ultimate outcome was that the hand stood almost at right angles to the arm. However, as the radius regenerated partially it showed to me the possibility of reconstructing bone from the periosteum.

Dr. DeGroat: I have nothing to say.

THE GENERAL PRACTITIONER AND THE DIAGNOSIS OF EARLY TUBERCULOSIS*

J. D. Riley, M. D., State Sanatorium

While tuberculosis recently has been forced down to fifth place in the mortality records of the United States, it still holds first rank as a cause of death during the most productive period of life, from 15 to 45 years, and so remains of such importance as to demand the most careful consideration of medical men.

The mortality rate is the least important problem of the disease from the racial standpoint, but the most important from the standpoint of the individual. Taking its greatest toll between the ages of 15 and 45, tuberculosis furnishes social, domestic and economical problems of tremendous importance. It causes on an average an illness of 3 to 4 years for each patient who dies of the disease. The effect of such a chronic illness on the ambition, the efficiency, the business and professional career, the economic attainments and the domestic and social life of the tuberculous individual, and on those who are associated with and dependent on him, even though he

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

should secure an arrest of his disease, is sufficient to make any one stop and ponder, and wonder what he would do were he the one affected.

The physician who recognizes the early and low grade types of tuberculosis and who conscientiously attempts to diagnose and treat pulmonary tuberculosis as such is not going to have smooth sailing. He is going to be disbelieved by patients and laughed at by confreres and considered a monomaniac by both.

Nevertheless, the early diagnosis of incipient tuberculosis of the lungs is one of the most common problems with which the practitioner has to deal. The task is not only frequent but also full of difficulties and of the greatest responsibility. Too often tuberculosis is far advanced before diagnosis is made and it is not unusual for the patient or family to suggest the diagnosis to his physician.

The purpose of this paper is to stress the importance of early diagnosis. One inexperienced hasn't the slightest conception of the tragedies caused by the more or less indifference of some medical practitioners. Sometimes physicians are afraid to suggest to the patient that he may have tuberculosis; fearing that he might place a stigma on the patient, or that the patient might go to another physician who will tell him that he does not have tuberculosis. A physician who accepts the duties and privileges of his profession and who does not at least so inform himself that he is able to either diagnose or refer the tuberculous patients who consult him is guilty of criminal negligence.

Much headway has been made in the early diagnosis of clinical tuberculosis in recent years. This has been the natural result of our increased knowledge of the disease and an improved technique in making examinations and furthermore has been aided by the fact that we now have hundreds of examiners familiar with the technique of examining for tuberculosis where we had one 25 years ago.

Furthermore, through the dissemination of knowledge concerning the nature and early symptoms of tuberculosis, laymen are coming to physicians more promptly on the appearance of symptoms than they formerly did. However, the same queries stare us in the face today that did at the beginning of the century: "Are we making the diagnosis as early as we should? Are our methods keeping pace with our knowledge of the disease and the manner in which the patient reacts to it?' It is unfortunate, but we must answer both of these questions in the negative. The man who gets the idea of the early or low-grade case of tuberculosis, and is able to recognize it; even though he comes into a community that already has a good medical personnel, sees an astonishing number of cases. Anything like an accurate understanding of tuberculosis is not as yet generally distributed among the rank and file of the medical profession. The early cases go the rounds; they have tonics and surgical operations and diagnoses. The appendices and heart cases and peptic ulcers are filtered out by competent men before they reach him. The genuine cases of tuberculosis, because of their chronic nature, do not respond permanently to tonsillectomies or to treatments of some sort, but eventually find their way to him one and all. But the trouble is they have often sacrificed their chance to get well before reaching one competent in the diagnosis of tuberculosis. It is not possible for the general practitioner to be a tuberculosis specialist, but it is possible for him to learn to recognize cases presenting certain histories, symptoms and signs suggestive of tuberculosis. I do not believe it the part of the internist to qualify as one competent to diagnose early tuberculosis, but he should be at least well enough acquainted with the common and important findings which should cause him to get tuberculous cases to the specialist before the disease is far advanced. The only possible way to cope with this great problem, is for the average practitioner to know when to suspect tuberculosis, and for them to work in close co-operation with the available tuberculosis specialist.

In order that diagnosis may be made as promptly as possible, it is necessary to understand the nature and cause of the symptoms and signs of tuberculosis and also to have a conception of the possibilities and limitations of each of the recognized methods of examination as they are carried out today. This is too much to expect of the average practitioner. For even though each generation of medical men are better and better trained in the science of diagnosis, yet we should hope to reach the point where patients seek medical advice earlier, at the beginning of pathogenicity. Then the problems of diagnosis will be much greater than they are today. Consequently, I think that the greatest opportunity

for service in tuberculosis work is attempting to bring the practitioners of general medicine into closer contact with our tuberculosis specialists in order that they might learn both to suspect and diagnose tuberculosis and refer it to competent hands. To think that a certain symptom or sign is diagnostic of tuberculosis (excepting tubercle bacilli in the sputum) or that rest, fresh air and food is all of the treatment, is to fail to properly diagnose or treat tuberculosis.

Early diagnosis in tuberculosis is conceded by all to be the most important factor in the prognosis of the disease.

The lowering of the mortality rate has been uniform and to some extent gratifying. There are, nevertheless, approximately a million people suffering from this disease in the United States today. We realize that early diagnosis means cure, that early diagnosis is the prime requisite if suitable therapy is to be established. The percentage of arrested cases will vary directly with the timeliness of the diagnosis. The favorable result depends essentially upon the discovery of the disease at a time when proper measures tending toward a walling off or healing of the diseased process may still be applied. Unless the patient is diagnosed in the early stages of the disease, his chances of arrest are greatly minimized. Furthermore, and more important still from the public health standpoint, the case that is not uncovered in the early stages becomes an important individual unit in broadcasting infection throughout his community. The situation is regrettable both from the standpoint of the individual patient and from the standpoint of the public health. It is doubly regrettable inasmuch as it is largely preventable. The factors which seem to render the early recognition of tuberculosis an objective, difficult of attainment are twofold. First, the public is not sufficiently educated in matters of tuberculosis. Second, medical education in tuberculosis has not been sufficiently featured.

Notwithstanding the energetic campaign which has been waged, the public, as yet, is not sufficiently educated in matters of tuberculosis. The laity does not appreciate sufficiently the significance of the symptoms, does not consult the physician until the best moment has passed. This situation, the discussion of which time will not permit in this paper, must be met by intensification of our present publicity campaigns.

Medical education in tuberculosis has not been sufficiently featured. The problem of diagnosis, to date, has not been emphasized sufficiently in medical schools. Many schools are not equipped, either in the matter of clinical material or in the matters of teaching facilities to give the student a sound diagnostic training in tuberculosis. As a consequence the average physician today is not sufficiently trained in the finer points of diagnostic technic. In many instances the practicing physician is content to wait for, and abide by the evidence of a positive sputum. Valuable time is lost. When the last word is said, when the final evidence is at hand, when the sputum has become positive, the disease process has frequently or even usually, reached the advanced stage; the most propitious moment for treatment has passed, and the prognosis is irrevocably changed for the worse.

It is conceded that the recognition of tuberculosis, particularly in the early stages, is no simple matter. The diagnosis constitutes a problem which cannot be handled in a haphazard manner. This paper will attempt to clarify in some degree the difficulty of early diagnosis and will now deal with the features that I consider the most important in establishing the diagnosis.

History Taking:

History taking is important in the diagnosis of all diseases. It is fundamental in the diagnosis of early tuberculosis.

Family History:

Tuberculosis in the family, according to some individuals, constitutes a stigma; consequently, the patient may be reluctant to admit the existence of the disease in relatives. Furthermore, in many instances, the patient may honestly be unaware that a parent or other relative died of tuberculosis. Frequently, careful questioning will elicit the history of a coughing grandparent, or of a mother or father who suffered for years from bronchitis or asthma which was in reality tuberculosis. The duration of exposure, the intimacy of contact, and the age of the patient at the time of contact should be closely studied. In infants or young children, contact with an open case of tuberculosis is of the greatest significance.

Personal History

Predisposition

It is hardly within the scope of this article to consider in detail predisposition. What is often considered predisposition is latent tuberculosis.

Race

The matter of race is important in both diagnosis and prognosis. Primitive races are more susceptible. In this country it is well to bear this in mind as regards Negroes, Indians and Mexicans.

Age

We must look out for the acute form of tuberculosis in infancy. In the pubescent, undernourished girl, addicted to diet fads and inadequate dress, we are inclined to suspect tuberculosis. We should shy at the diagnosis of chlorosis or anemia until we have definitely excluded a tuberculous condition. Susceptibility decreases from infancy until old age when it increases again.

Habits

A history of excesses of alcohol, tobacco, energy dissipation and bad habits often precede a breakdown with tuberculosis.

Previous Illness

Pleurisy:

A history of pleurisy must arouse suspicion. Every pleurisy which occurs in the absence of acute respiratory infection should be considered tuberculous until proven otherwise.

Ischiorectal Fistula:

Ischiorectal fistulae are not infrequently tuberculous in origin and should lead one to suspect a tuberculous process in the lungs.

Diabetes:

Tuberculosis is quite frequently associated with diabetes.

History of Present Illness

The history of present illness must be inquired into in minute detail. An attempt should be made to determine definitely when the patient first started to cough, lose weight, have night sweats, or expectorate blood-streaked sputum, etc.

Symptoms

Cough:

While there is no specific cough which typifies tuberculosis; nevertheless, cough of one kind or another is usually one of the outstanding features of pulmonary tuberculosis.

Fever:

Fever is invariably present in the active case. The temperature should be taken at 2-hour intervals while the patient is under observation. An elevation of temperature, usually afternoon, no matter how slight, if constant and intensified by slight exercise, must be considered quite suggestive of tuberculosis.

Loss of Weight:

A progressive loss of weight for which no other cause can be found should suggest tuberculosis.

Night Sweats:

Night sweats are frequent even in the early cases. Sometimes it is the first symptom which attracts the attention of the patient, but a considerable percentage of patients do not complain of night sweats until the disease is already rather well advanced.

Hemoptysis:

Hemoptysis is always suggestive of tuberculosis. Any patient who coughs up blood no matter how little should be sent to a tuberculosis specialist for thorough study and continued observation before being dismissed as non-tuberculous.

Tubercle Bacilli in the Sputum:

The finding of tubercle bacilli is, of course, in almost every instance, conclusive.

Summary:

As already indicated, the symptomatology of early tuberculosis is protean in its manifestation. There are no symptoms or signs which can be considered universally pathognomonic. The diagnostician must consider the picture as a whole and must be prepared to find a picture that varies in its details in each particular case. The trained and experienced diagnostician has learned to form an opinion from the general clinical impression. There may be no symptom that is outstandingly characteristic of tuberculosis; the ensemble, however, of vague and unexplainable symptoms may be sufficiently distinctive.

Physical Findings

Diagnosis of early tuberculosis from the physical signs is difficult and requires the most favorable environment possible. Every examiner will develop his own individual technic—most physicians find it easy and logical to go through the regular routine of inspection, palpation, percussion and auscultation. Time will permit of only a brief discussion of the value of each of these.

Inspection:

The examiner should make a general review of the patients physique. The most suggestive finding by inspection is a unilateral lagging of the affected side.

Palpation:

Palpation may confirm unilateral lagging as suggested or indicated on inspection. Tactile fremitus may be increased over the diseased area.

Percussion:

Light percussion is, in the opinion of most, the best method. Percussion has a distinct field of usefulness in locating areas of changed resonance. The interpretation of the change in resonance and its significance is a matter for the judgment and experience of the physician.

Auscultation:

Auscultation is the single, most important diagnostic measure in the diagnosis of tuberculosis. The presence of moisture in the lung fields above the hilus, in the absence of an acute respiratory infection, usually denotes a tuberculous process. Approximately 95 per cent of chronic infections above the hilus are tuberculous. On the contrary, only about 5 per cent of the chronic infections which primarily affect the base are tuberculous in character.

Roentgenological Findings:

X-ray examinations should be routine in every case. The x-ray in some reveals a lesion of considerably greater extent than was indicated by physical examination. On the other hand, in the early case, the x-rays are frequently disappointing. Stereoscopic plates are, of course, advisable. But the personal element enters into both the x-ray technique and the interpretation. The proper interpretation of shadow densities, requires training and above all, individual experience and study. The x-ray examination is indispensable in pulmonary tuberculosis, but its value is frequently exaggerated, and an unlimited significance cannot be attributed to it. It is only an adjunct to other methods, and permits the possibility of a diagnosis when correlated with all clinical findings. In the absence of clinical findings the roentgen picture alone is not sufficient. The foci must have a certain size and density to be determined by the x-ray, and therefore, a negative x-ray finding does not exclude the possibility of clinical tuberculosis. Fluoroscopy alone is not satisfactory; plates must be taken in addition. The plate is most important and can be elaborated upon by fluoroscopy. Deviation from normal without other findings cannot be considered pathological. Not all cavities can be determined roentgenologically and not all findings which appear to be cavities are really such. The roentgenologist should not diagnose tuberculosis, but should render his physical interpretation of his plates to the physiologist as an adjunct to all clinical findings.

Tuberculin:

Tuberculin may be compared to electricity. Under proper control it has a great field of usefulness, but in the hands of the untrained it is very dangerous. Some physicians are still inclined to consider the ordinary dermal tests, diagnostic of actual tuberculous disease. The dermal reaction indicates that tuberculous infection with subsequent allergy due to sensitization, has occurred. The reactions, therefore, are of value only in young people as a means of determining whether or not tuberculosis infection has taken place. When we recall that approximately 70 per cent of adults evidence a positive tuberculin skin reaction, it must be apparent that the test is useless and misleading as an indication of active tuberculosis. It must be recalled too, that a negative reaction may occur in an actually ill or moribund child in whom allergy has been lost due to an overwhelming infection.

The Mantoux or Intracutaneous Method:

The Mantoux Test is more accurate than the others. It is the intradermal test and its accuracy and usefulness depend on the tuberculin being introduced intradermally and not subcutaneously.

The concentrated old tuberculin is kept in the refrigerator when not in use. The bottle should be opened under sterile precautions. The glassware employed must be sterilized and the dilutions made under sterile precautions.

Preparing the Solution—Label three tubes 1.0 mgm., 0.1 mgm. and 0.01 mgm. respectively. In the tube labeled 1.0 mgm., place 9.9 cc. of sterile salt solution. With a graduated sterile 1.0 cc. pipette, add 0.1 cc. of the concentrated tuberculin to the tube labeled 1.0 mgm. By means of another 1.0 cc. pipette, mix the contents of this tube and transfer 1.0 cc. to the tube labeled 0.1 mgm. With a third fresh

1.0 cc. pipette, mix the contents of the tube and transfer 1.0 cc. from this tube to the tube labeled 0.01 mgm. Mix the contents of this tube with a fourth fresh pipette. The tube labeled 1.0 mgm. will contain 1.0 mgm. of tuberculin per 0.1 cc. (The quantity to be injected). The tube labeled 0.1 mgm. will contain 0.01 mgm. per 0.1 cc.

Method of Making Test:

The injections of the diluted tuberculin are made on the flexor surface of the forearm after cleansing the area with 95 per cent alcohol. For injecting a 1.0 cc. tuberculin syringe and a sharp 26 gauge, one-half inch long platinum needle are used. The injection should be made intradermally and a rounded elevation formed at the site of the injection.

For the first injection, 0.1 cc. of the dilution in the tube, labeled 0.01 mgm. should be given. The patient is instructed to return in 48 hours. If the reaction is negative with that dose, he is injected in the opposite forearm with 0.1 cc. of the dilution in the tube labeled 0.1 mgm. If after 48 hours there is no reaction, the patient is given 0.1 cc. of the dilution in the tube labeled 1.0 mgm. If after 48 hours this proves to be negative, the tuberculin reaction is regarded as negative.

Interpreting the Reaction:

The reactions are read 48 hours after injection. If the patient is unable to return in 48 hours, a reading may be made 72 hours after the injection. No reading should be made after that period of time. If the patient returns after more than 72 hours following the injection, he should be re-injected with the same dose, or if the reaction was negative, according to the patient's description, the next higher dose may be given.

A positive reaction is one which shows edema and redness at the end of 48 hours. If there is no edema, the reaction is regarded as negative. Reactions are arbitrarily graded from one plus to four plus.

A plus reaction is one with slight but definite edema (not more than 10mm. raised about 1 mm.); the area of redness, which is less important, is usually much larger.

A two-plus reaction is one with well-defined edema (10 to 15 mm. across, raised somewhat more than 1mm.) and an area of redness which is usually larger than the area of edema.

A three-plus reaction is one with extensive edema (measuring more than 15 mm. and raised more than 2mm.) With wide area of redness, but with no necrosis of the skin. Redness in a few instances extends along a lymphatic.

A four-plus reaction is a reaction characterized by extensive edema, redness and a spot of necrosis. It may be associated with elevation of temperature and malaise.

The reaction is sometimes delayed. When the reaction is repeated, examine the sites of previous injections.

In those cases where the reaction is at all questionable, the patient should receive the next highest dose.

The subcutaneous test is of very definite value in the diagnosis of tuberculous disease. But it is very dangerous except in the hands of the tuberculosis specialist since it may awaken a latent or quiescent tuberculous focus. This procedure, which often results in the reactivation of a quiet focus, consciously and wilfully undertaken is wholly unjustified and inadmissable. It often causes a spread of the disease. Consequently, the use of the subcutaneous test for the purpose of diagnosis must be condemned. Its occasional use in the hands of an expert for the purpose of exclusion rather than confirmation may be justified. But we should never feel justified in exposing what we believe to be a tuberculous individual to the dangers of the subcutaneous test, to the possibilities of reactivating his lung lesions.

In conclusion, it may be well to summarize briefly the most important points in the diagnosis of early tuberculosis. We should hesitate to place absolute reliance on any one symptom or sign except, of course, the unequivocal presence of tubercle bacilli in the sputum.

The personal and family history, the clinical evidence, and the laboratory findings, each has its place of importance in the problem of diagnosis.

In the family history the question of exposure and the duration and extent of such exposure hold deep significance.

A history of pleurisy which occurs in the absence of an acute respiratory infection is significant, as is also the presence of ischiorectal fistula.

History of hemoptysis is significant, if hematemesis and bleeding or oozing from the pharynx and nasopharynx can be ruled out.

Moist rales occurring above the hilum constant and noted at the height of deep inspira-

tion, should in the absence of acute respiratory infection, be considered tuberculous until proven otherwise.

Roentgenological findings, offer valuable corroborative evidence.

The finding the tuberele bacilli in the great majority of instances is conclusive. There are however, possibilities of error which should not be overlooked.

The cutaneous tuberculin tests are indicative of infection rather than disease, and consequently constitutes no criterion on which to base a diagnosis of active tuberculosis (except possibly in early childhood). The subcutaneous test is accompanied by definite dangers and should be used (if at all) only as a final measure to exclude tuberculosis in individuals who are, we are inclined to think, nontuberculous.

This paper would not be complete without a few words as to the cooperation of the general practitioner and the tuberculosis specialist. It is plainly your duty to be able to recognize suggestive symptoms and signs indicating early tuberculosis and refer such cases to the tuberculosis specialist in time to cure them. The scientific man in tuberculosis work (as in all other fields of medicine) is conservative in giving his opinions. If you cannot feel the importance of the great problem of tuberculosis, this is sufficient evidence of your inability to render the service which an ever trusting public has a right to expect of you. A lifetime of study could cover only a small part of all that is to be known about tuberculosis; and the only possible way for us to serve humanity to the fullest extent is for us to work harmoniously together, disseminating knowledge of tubereulosis until we have eradicated this scourge to humanity.

DISCUSSION

DR. GEO. B. FLETCHER, Hot Springs: There is one feature of this paper which recalls to me that someone has said that a positive sputum is positive, but a negative sputum is not necessarily negative. In other words a negative sputum does not prove the absence of tuberculosis.

After the World War I continued in the regular Army service and spent two years in a tuberculosis hospital at Fort Bayard, New Mexico. There, what might be termed an amusing occurrence along this line, came to my attention. It was to the advantage of some of these boys who had shown from twelve to twenty negative sputums to show a positive sputum in order that their disablity rating, which would be affected by a negative sputum would be raised. One young fellow who had a persistently positive sputum obtained a very comfortable income peddling a positive sputum until he was apprehended.

I would like to say a lot about auscultation, but the time is limited. I am convinced that many times we overlook moisture in the lungs because we do not look for it in the right manner. With ordinary breathing we may perhaps pick up a prolonged expiratory note which should not be there, but I am convinced that we would pick up many rales of the so-called fine or medium moist indeterminate type if we would have the patient empty the lungs as much as possible, then give a cough which would further empty the lungs and follow this by an inspiration.

Frequently at the beginning of this inspiration we will pick up moisture which we would not find by simply having the patient take a deep breath.

DR. W. R. BROOKSHER, JR., Fort Smith: I am very much interested in Dr. Riley's paper, particularly from the standpoint of the Roentgenological findings. I would like to make a plea at this time with the men doing the general diagnosis of tuberculosis to take the Roentgenologist into your confidence: Tell him something about your case. The roentgenological findings are not an open-and-shut affair. You can't take the film and tell what you have in it without a little history. You should have cooperation. In no other field of medicine, unless possibly gastrointestinal disorders, is cooperation between the clinician, the laboratory and the Roentgenologist: more necessary than in the diagnosis of diseases of the chest. It is very important, more so in the diagnosis of chest diseases, to have films of the highest possible diagnostic quality. Your technique must be flawless. There are just as many errors made in the way of over-interpretation as of under-interpretation by the Roentgenologist. This doesn't apply to the trained man, but it does apply to his technique; if he is satisfied with a sloppy film he will get a sloppy diagnosis. Your Roentgenologist should not endeavor to classify the tubercular findings or inflammatory changes in the chest wall as tuberculosis of the active, inactive or quiescent types. If he does, he is looking for trouble and it is coming to him. He should interpret the shadows on the x-ray film in such a manner that the clinician can correlate them with his physical findings and a proper and satisfactory diagnosis be made.

Dr. Riley said he never ruled out tuberculosis without a negative x-ray. He is correct.

It has been my privilege recently to review a series of something like 140 cases of veterans applying to the U. S. Veterans Bureau for compensation on account of alleged pulmonary tuberculosis. At this time the patients were referred to the Roentgenologist and medical examining board and findings made independently. Due to the fact there was a time limit set upon these cases, it was incumbent upon those of us working on this board to give as definite and positive a diagnosis as possible and to that end as Roentgenologists we endeavored to make a diagnosis of active tuberculosis where activity was present and make a negative diagnosis of tuberculosis if such were the case. In checking these over after a perod of seven years' time when these men have been through a series of examinations two or three times a year in different parts of the country, have been hospitalized for observation and all, it was quite a pleasure to me as a Roentgenologist to find out that the percentage of accuracy of the diagnosis of tuberculosis in these cases was something like 75 per cent on the x-ray side and something like 65 per cent on the clinical side.

I enjoyed the paper.

DR. B. L. WARE, Greenwood: I want to ask one question. He said positive sputum was not always positive.

DR. LEWIS J. MOORMAN, Oklahoma City: I want to commend Dr. Riley for presenting this very important paper and to state that, as a rule, a tentative diagnosis of tuberculosis can be made from the history. In other words the symptoms are often at most diagnostic but often their true diagnostic significance is not understood or they fail to come under consideration because of imperfect history taking. If we have a thorough knowledge of the common symptoms of tuberculosis and also have the habit of careful history taking the diagnosis of tuberculosis is materially simplified.

With reference to the tuberculin reaction in infants and very young children. I believe it is not more significant than a similar reaction in older children. While it is true that a positive tuberculin test in the very young cannot be far removed from the time of infection, in my experience this fact has not proven of great significance. These very young children reacting to tuberculin have behaved clinically just as have the older children.

DR. RILEY, in closing: A number of things have not been included in this paper because of lack of time. The first gentleman brought out an important thing which I don't think I mentioned in the paper, that is, that cough at the end of expiration brings out the rales.

I believe in the x-ray most thoroughly, but it has to be in the hands of an individual who knows how to use it. If you wait for a positive sputum, you lose the best chance to get your patient well. Symptoms are more important so far as prognosis is concerned, even more so than your physical or x-ray findings.

Tuberculin in a child, the younger the child with a positive tuberculin test the more likely a recent infection.

SOME FACTS CONCERNING THE CARE OF THE NEW BORN CHILD*

G. D. Murphy, M. D., El Dorado

By the term "New Born" is usually meant the infant in the first month of its separate existence. Vital interest in the mortality of the New Born is certainly not misplaced, and in spite of the most favorable results which have been obtained in lowering the death rate of infants, statistics show that the mortality in the first month of life has remained practically stationary. This being true, it will not be necessary for me to apologize for taking up your time in reviewing some facts which I must acknowledge are very elementary, yet they are things which evidently are occasionally passed over lightly and neglected in obstetrics. I do not intend for my remarks to be construed as a criticism against any one, but as a word of encouragement, for I do know that interest in this period of life is rapidly growing, and though it has been woefully neglected in the past, it is rapidly coming to its own, and in a few more years the new-born child will be getting due consideration, as our young graduates from Medical Schools will come out with a more thorough knowledge of the problems confronting us at this period of life, and will surely be able to reduce the mortality greatly in the next few years to come.

The new born child is here through no choice of his own. He is hopelessly helpless insofar as caring for himself is concerned. then he has a right to expect, even to demand, that such care be given him as will not only be conducive to a sound well developed body, if he should survive the first three weeks of life, but such care as will give him a more confortable existence during the first three weeks of life—care that will lessen his chances of having discomforts which are brought about by faulty handling during these days. If we will consider for a moment that the span of life for each human individual extends from conception to death and at the same time remembering that the most momentus changes in function and environment during this period of existence occur in the brief period of child birth, then we will realize that a consideration of requisite care in the first month of life is highly pertinent, for this factor alone regulates the outcome in a large measure and is one of the most practical phases of preventive medicine. Of the large number of children who survive the liabilities of the prenatal and intrapartum period, it is said that four per cent die within the first month of life and about eight per cent during the first year. In this country alone the number of deaths each year amounts to 100,000 during the first month of life and 200,000 during the first year. No doubt these figures could be reduced some at the present time, if more interest was taken in the new born child and greater advantage was taken of methods and knowledge at our disposal. And one step forward in this direction would be to insist, when at all possible, for our primiperas at least, go to a hospital for delivery. If this cannot be accomplished, then the giving of specific instructions for the immediate care of the new born when a trained nurse is not in attendance. But, what takes place in a

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

number of instances is very well pictured by Dr. J. M. Moser in his article on care of the new born. Here is what he says "When the last torturing pain accomplishes its purpose and the cord is tied the accoucheur watching the infant borne away in a blanket, washes his hands and departs, breathing sighs of relief that his work is done." But in truth, we know that his work is not done, but, in fact, just begun. He has the responsibility of a new life on his shoulders. A life whose future greatly depends upon the intelligence and skill of its attendants during the first days after its birth.

I shall simply refer to some of the problems which confront us at this stage and emphasize some of the points that I think worthy of consideration. First of all I would like to say a few words on the importance of maintaining a normal body temperature in the new born.

Of great importance in the physiology of the new born is the relation between the surface of the body and its weight. Compared with the surface of the body of the adult, for each kilogram of weight that of the mature new born is almost three times as large, and that of the premature even larger.

In every day life we keep the surface as small as possible when we wish to conserve heat and we make it as large as possible when we intend to throw off heat. For instance, in heating our dwellings we use plain round pipes to convey the steam or hot water to its destination, but we have irregular surfaces and ornaments on our radiators and also on stoves when we want the heat to be given off. We can understand that the larger surface of the body of the infant in comparison to its weight is a menace to the baby, because it makes it easier for it to radiate heat. Again the baby's skin being wet with amniotic fluid, which immediately begins to evaporate producing a chilling effect. And again the baby's heat regulating centers are not accustomed, yet, to function, so first of all the immediate warmth after birth is absolutely essential and the physician should see to it that warm blankets and hot water bottles are in readiness, and properly placed. The infants' temperature should be taken at intervals and maintained at proper levels, 98-100 F., by hot water bottles if there is a tendency to subnormal. Extreme precaution should be taken against sudden chilling and all unnecessary handling forbidden especially in premature and delicate infants. Remembering that excessive heat may send the body temperature to great heights, and such occurrences are often referable solely to close proximity to hot radiators, for example. The skin doubtless adapts itself slowly to the function of temperature regulation in co-ordination with the brain center.

A few words in regard to the resusitation of asphyxiated babies. If measures for resusitation become necessary, they should be employed with caution and extreme gentleness. In the milder forms of asphyxia, simple spanking or flecking the soles of the feet, or the alternate use of hot and cold water will suffice in the majority of cases. In severer forms, however, these are ineffectual and more strenuous measures are called for. As a last resort, inflation of the lungs by mouth to mouth method has saved many a life, though advised against by many authors. If a strip of steril gauze be placed over the infant's mouth during the procedure and forceful breathing limited by the operator the damage may be minimized. I have frequently seen this method succeed when others have failed. The pulmotor for this purpose has been unsuccessful in the hands of the general practitioner. What ever method we use we should not forget to clean out the mouth and pharynx first, and keeping in mind all the time that the asphyxia may be due to a slight intracranial hemorrhage, in which great injury may result from vigorous manipulations. After difficult resusitation, of course, the baby should be watched closely for other symptoms of intracranial hemorrhage, which does not only occur in large babies and in difficult deliveries, but sometimes occur in normal and easy births, due to pathological conditions present in the blood or vessels. The point I am trying to make is for us to watch new born children more closely for birth injuries of all kinds, instituting the proper treatment early in order to minimize the immediate danger as well as danger of a permanent damage to the nervous system resulting in Little's Disease.

A few remarks in regard to intracranial hemorrhage. If the hemorrhage is massive, he shows symptoms immediately after birth. He is blue, breathes with difficulty, develops tremors of the arms and legs within a few hours, and may die in a short time after birth. Rarely does recovery take place in extreme cases and when it does, Little's Disease is its sequel. The treatment does not differ

from that used in the latent or slower types, and includes lumbar puncture, transfusion or the use of coagulants subcutaneously, all done with greatest possible rapidity. To prevent permanent paralysis, Dr. John Foot says, surgery should be resorted to within a week, provided coagulation time has become normal. In such infants coagulation test may be done, but are not of the importance at first as in cases where delayed bleeding occurs. The delayed bleeding is the most frequent type. Symptoms do not occur until focal pressure has developed with the skull, as the infants skull is capacious, slow bleeding goes on for 48 to 72 hours before signs are visible. At birth these infants may appear perfectly normal. The earliest single symptom perhaps is disinclination to nurse. Such infants may begin to nurse vigorously within the first 24 hours and nurse poorly or not at all afterwards. They frequently protrude the tongue to an abnormal degree. Cyanosis may be the first symptom noticed and this is frequently attributed to congenital heart disease, the much spoken of patent foramen ovale. Though congenital heart disease is relatively infrequent in routine autopsis, as compared with intracranial hemorrhage. Another condition which will produce cyanosis is malformation of the esophagus. I saw two such cases at the Warner Brown Hospital both of which the first thing noticed wrong was that the bady was cyanosed. After taking fluids, both had an atresia of the esophagus and connection between the trachia and the esophagus.

To sum up, in the first 24 hours in either difficult or normal delivery irritability or extreme lethergy, disinclination to nurse protrusion of the tongue in the second 24 hours, tenseness of the fontanel, spastic twitching of the limbs, cyanosis or paleness, all point to a progressive hemorrhage within the infant's skull, and as stated a large number of these infants have diminished coagulability of the blood, which may be considered among the symptoms and any or all of these symptoms should put us on our guard that we may do the proper thing for the infant at the proper time. Keeping in mind the nursing care of the infant, which is of paramount importance. Strict attention should be paid to the nursing care of these infants, as we know that the primary aim of all treatment is to favor coagulation. The frequent handling of the infant for the purpose of changing or dressing or undressing him is a positive menace to his life, and would not be permitted in any other form of intracranial hemorrhage. The infant needs little more about him than a diaper and blanket and this simple garb should be insisted upon. Diapers should be changed without changing its position. The infant should be kept warm, an ice bag wrapped in a towel so as to be cool rather than cold, kept on its head. No direct nursing should be allowed. The mother's breast should be milked and the milk given to the infant by means of a Breck feeder or a medicine dropper. This routine should be employed for the first week or ten days.

Too often, I am quite sure, this all important problem is neglected or left to the family to manage without any instructions from the doctor. For the first 72 hours the new born should receive two to three ounces of boiled water at four hour intervals. It does not seem to me to be of any advantage to add sugar to the water during the first days of life, on the other hand it may lead to digestive disturbances. Immediately before the water is given, the infant should be put to the breast and taught to nurse, even if it gets no milk for three days, the colostrum may be plentiful.

An infant requires approximately one-sixth of its body weight in milk daily and until the milk comes abundantly the difference must be made up in other fluids and if this is followed up closely it will be found that there are fewer cases of inanition fever and physiological icterus in infants receiving early and sufficient fluids. Now for the average case, experience of various clinicians has shown that the three hour intervals for breast nursing and four hour intervals for artificial feeding has produced the best results. A study of each individual case will decide which is the best interval for that particular infant. The four hour schedule, I do not believe, should be established as a routine measure for breast fed infants. To follow it rigidly leads, in many cases to loss of breast milk from insufficient stimulation and to failure of a sluggish lazy baby to take sufficient nourishment in 24 hours. I'm thoroughly convinced of this after trying out the four hour schedule on all infants for one year in my practice.

When the interval has been decided upon, we should be specific in our directions to the mother or the attendant in order to impress upon them the necessity of regularity. I began to take notice several years ago, how in-

terested young mothers would seem when they were given specific writen instructions for the care of their young babies, and also how that the good old grandmothers and others began to hesitate about doing things for the baby—that is, such practices as pressing the baby's head back in shape, or pressing the drop of milk out of the little breast, for some mysterious reason, the giving of catnip tea or some other form of teas, in order to cause the baby to break out with the hives, etc., even some times the giving of castor oil or calomel. Now instead of doing these things they are saying, "Things have changed so since I had babies of my own, that I am afraid to risk my judgment," and they are rapidly giving up these vicious practices, gladly turning the job over to the doctor when he seems interested enough to take the lead. When I deliver a baby for a young mother now, or am called upon to supervise a new born baby's routine, the mother is given a typewritten sheet which is headed "Daily Routine for the Baby," and it covers every thing necessary for the mother to know in order to properly care for a healthy new born, and I find that they appreciate this interest. That it proves the way for a more comfortable new born, and a happier mother. These mothers are fast learning that physicians, those especially most concerned with the health of children, have left far behind the old theory that the time for a doctor to deal with the baby is when the baby is sick, and have worked out the far better plan of keeping watch over the baby's health consecutively, beginning even before birth.

DISCUSSION

DR. D. E. WHITE, El Dorado: One particular thing in Dr. Murphy's paper to which I would like to call attention is his treatment of asphyxiated babies. He made the statement that as a last resort he would advise mouth to mouth insufflation. I do not believe this should be used as a last resort, but in most cases of asphyxiation it should be used as a first resort, and by so doing you will save thousands of babies every year. According to our mortality rate one hundred thousand babies are lost during or just after birth and another one hundred thousand are lost within four weeks after birth. In regard to this first series, mouth to mouth insufflation will save a large number of these babies and it should be used first, thereby saving a lot of valuable time.

Another thing that he did not mention in his paper which in my opinion is very important is the treatment of the baby's eyes immediately after birth with silver nitrate solution. At this time there seems to be a trend or popular wave for the doctors in general to use argyrol or boric acid solution instead of the silver nitrate solution. In the first place there is a State law in the majority of States that requires the use of silver nitrate in the baby's eyes immediately after its birth. The crede method consists of using a two per cent solution of silver nitrate which is immediately neutralized with saline solution. However, the majority perhaps use a one per cent solution without neutralizing same. Aat any rate too much stress cannot be put on this one particular point in regard to the proper treatment of the baby's eyes after its birth.

I enjoyed Dr. Murphy's paper very much.

DR. G. A. HEBERT, Hot Springs: I think the paper contains some very valuable points. I would like to say that I believe it is the inalienable right of every child to be born free of disease and we all know the ravages and devastating effect of both tuberculosis and syphilis in the new born, and in that connection I have often wondered whether it would be within the realm of possibility to have some effective legislation that would prevent the marriage of both syphilitics and tuberculars. (Applause).

C. B. BILLINGSLEY, Fort Smith: One point of Dr. Murphy's paper which I consider of prime importance is the effort to hold the baby at birth heat. It is well known fact, and we all agree that the baby when born has the mother's heat and the conserving of that heat in the baby after birth is in my opinion of the highest importance. Many babies die on account of handling and exposure after birth due to the loss of heat. Especially is this true in premature babies.

Another point in Dr. Murphy's paper which I especially appreciated was his idea of giving written instructions to the mother about the care of her new baby. This will bring about two things. It will make the point clear to the mother of what she should do for her baby and will prevent the grandmother or some other overzealous aunt or relative from doing a lot of unnecessary things and instituting a lot of foolish ideas in the care of the infant.

I appreciated Dr. Murphy's paper very much.

DR. H. D. WOOD, Fayetteville: A little carbon dioxide with oxygen will do more to bring color to the baby than any mouth to mouth breathing.

DR. MURPHY, in closing:

If there is any part of the paper I would like stress more than any other it is that pertaining to the giving of specific instructions for the care of the baby.

I believe that if this was practiced by all doctors we would certainly see the death rate at this stage of life reduced considerably.

I frequently have babies brought to my office whose mothers have had no instructions whatever about the nursing care and feeding care, they are allowed to nurse any time they want it. Of course, they do not do well, then they begin to get things such as castor oil and calomel.

Not long ago I saw a baby of 5 weeks who was not doing well, the mother told me that it had been given five throughs of calomel and had been given doses of castor oil practically every day and still she could not see that the baby was any better.

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Abstract

RECENT CONTRIBUTIONS OF MEDICAL MEN TO SURGICAL PROGRESS

William J. Mayo, Rochester, Minn. (Journal A. M. A., August 30, 1930), says that when he began the practice of medicine, hospitals had surgeons and clinicians who were differentiated by title, but in actual practice the surgeon was a clinician who devoted more of his time to surgery than to medicine. The surgeon made the general examination and the diagnosis, operated on the patient, and cared for him after operation. Today the enormous advance in surgery has split the surgical profession into groups of specialists in fields which often are small, possibly too small. The surgeon has largely lost touch with general medicine, and because of this limitation he is dependent on the clinician as never before. If medicine is considered in its broader sense, the man who has been trained in medicine and who has not lost himself in an attempt to memorize the minutiae of laboratory technic more nearly has maintained his place as a well informed practitioner than has the surgood. Mayo discusses briefly a few problems that concern medicine and surgery; these depend on a better understanding of physiology and have been developed through experimentation on animals and through clinical investigation. Concluding, he says: I come now to a matter of great significance to the medical profession. It was noted in the Royal Victoria Hospital of Manchester, England, that the death rate among the surgeons on the staff was more than three times that among medical practitioners in the same age period. It is true that much of the disability among surgeons is due to the fact that surgery is to a certain extent a handicraft and that age and anxiety produce a reduction in skill; but, after all, that is not the most serious consideration. The keen clinician, as he grows in experience, becomes more and more valuable as age advances. He is not exposed to those malign influences of anxiety and responsibility to the same extent as is the surgeon. One might say that the clinician sees his patient drowning and throws him the best means of relief that he has, but that the surgeon in order to give relief jeopardizes the patient anew and in a different way, that relief may follow. It is noticeable that a common cause of death among surgeons is disease of the heart, es-

nated under a responsible head; therefore be it pecially coronary stenosis, coming on in the latter part of the sixth and the early part of the seventh decade of life. In all other respects the surgeon maintains his general health equal to others, and often postmortem examination does not show evidence of other serious disease. The tendency to death from heart disease is not confined to surgeons, but is common among all men who live lives of stress, in which stern control of the emotions is necessary. With the better understanding of general physical conditions, I hope there may be an advance in the understanding of certain diseases of the heart which directly concern the surgeon. I recall with great sadness my many friends among surgeons who, around 60 years of age, have died from coronary stenosis and disease of the cardiac muscle. With the remainder of their bodies in excellent condition, why should many men who work under great emotional strain, controlled by effort of will, succumb to this deadly malady? Here is a problem for clinical investigation which demands the aid of experimental investigation and laboratory studies in which the surgeons may possibly aid in affecting their own salvation.

Personal and News Items

Dr. and Mrs. J. Palmer Sheppard have returned from a vacation in Canada, their itinerary included Montreal, Quebec and Toronto.

Dr. Calvin A. Churchill of Little Rock has located in Batesville where he is associated with Dr. R. C. Door.

Dr. Theo Freedman of Little Rock presented a paper on "Later Developments of Syphilis as Pertaining to Life Insurance," at the meeting of the National Fraternal Congress of America, August 18-19, at Detroit.

Dr. A. C. Haney and family of Russellville have returned from a tour of the northern States and Canada. Dr. Haney spent three weeks at the Mayo Clinic.

Mrs. Mattie J. Scott, wife of Dr. F. M. Scott, of Paragould died August 25. We extend our sympathy to Dr. Scott in his bereavement.

Dr. F. Walter Carruthers returned September 1st from a twenty day trip on the Pacific Coast. Dr. Carruthers' family returned with him, after having spent the summer at Long Beach, California.

Dr. S. T. Tapscott of Searcy, whose health has been failing, is at present in the Good Samaritan Hospital, Cincinnati, Ohio, for an indefinite stay.

Dr. F. Walter Carruthers attended the meeting of the American Congress of Physical Therapy held at the Hotel Jefferson, St. Louis, during the week of September 8-12. Dr. Carruthers was a special invited guest and he addressed the Congress on "Diagnosis and Treatment of Acute and Chronic Bone Abscess."

A postscript in a secretary's report reads as follows:

"Hot as H—. Lots of sickness, no money at all. Everything burnt up. Some sorghum, no corn (liquid or solid). Owe everything in town except the Postoffice.

A SECRETARY OF PUBLIC HEALTH

The following resolution was passed at the Convention of the American Medical Editors' & Authors' Association.

WHEREAS, the health of its citizens is our Nation's greatest asset; and

WHEREAS there is now much duplication of effort and division of responsibility in regard to health matters, as now conducted; and

WHEREAS Labor, Commerce, Agriculture and other matters of relatively less importance are represented by an officer in the President's Cabinet, while the Nation's health is not so represented, although such representation has been recommended by the American Medical Association and endorsed in their platforms, from time to time, by both of the major political parties; and

WHEREAS it seems reasonably certain that the various health activities now in operation could be more efficiently conducted if coordi-

Resolved That the American Medical Editors' and Authors' Association, in convention assembled (at Detroit, Mich., on June 24, 1930) recommends and urges that steps be taken immediately for the creation of a Portfolio of Public Health, in the Cabinet, and that a copy of this resolution be forwarded to the Secretary of State, Washington, D. C., to the secretaries of all National and State Medical Organizations and to all members of this Association.

Signed, for the Association:
H. Lyons Hunt, Pres.
E. Vandervoort, Sec.

Correspondence

EDITOR:

To those who do microscopic work it may be interesting to know that Liquid Petroleum is not only "just as good" but is superior to Cedar Oil for oil immersion work for the following reasons:

1. Field of vision just as clear.
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3. Easily removed from slide at any time by wiping.
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7. It is cheaper and more convenient.

Yours,
John B. Wells, M. D.,
Scott, Arkansas.

The SOUTHERN MEDICAL ASSOCIATION meets this year in Louisville, Kentucky, the Twenty-fourth Annual Meeting, November 11-14.

Obituary

WILSON, HORACE OLIVER— Dr. H. O. Wilson of Rison died September 4, 1930. Aged 46. He is survived by his wife and one daughter.

LUNT, JAMES PHILLIP—Dr. J. P. Lunt of Rector died August 14, 1930. Aged 54. He was a native of Oakland, California, coming to Arkansas several years ago, and practiced his profession at Rector and Leonard.

Dr. Lunt is survived by his wife, a son, James Lunt and a daughter, Miss Esther Lunt.

PETTUS, COWLEY S.—Dr. C. S. Pettus of Little Rock, died August 17, 1930. Aged 53.

He was born in Morton, Scott County, Miss. Educated in the public schools of Morton and Walnut Grove, Miss., and received his degree in medicine from the University of Kentucky in 1904. He practiced for eight years in El Dorado before moving to Little Rock. From 1917 to 1921 Dr. Pettus was superintendent of the Pulaski County Hospital.

In 1899 he married Miss Nellie Kirkland at Morton, Miss., who survives him. He is also survived by two children, Miss Sybil Pettus and Houston Pettus of Little Rock and three sisters.

County Societies

CRAIGHEAD-POINSETT MEDICAL SOCIETIES

(Reported by THAD COTHERN, Sec.)

The Craighead-Poinsett County Medical Society met in Bay, August 7, with Dr. and Mrs. O. V. Smith as hosts.

Among those present were: Bates, Lake City; Burge, Nettleton; Cothern, Finch, Haltom and Henderson, Jonesboro; Hunn and Verser, Harrisburg; McDaniel, Tyronza; Reagan, Marked Tree; Harrison, Truman; Smith and White, Bay. Some laymen were present among them being Prof. Tuggle and A. J. Englehart of Jonesboro.

Scientific program:

"The Causation, Prophylaxis and Treatment in the Common Diseases. Conditions

and Disorders in the Mouth of Infants, Young Children and Frequently in Adult Life." By W. C. Haltom of Jonesboro.

"Tularemia—So-called Rabbit Disease.' By H. A. Stroud of Jonesboro.

Mrs. Smith entertained the ladies while the scientific program was in progress, after which they were joined by the doctors and were served watermelons and cantaloupes.

Dr. Hunn of Harrisburg invited the Society to hold its next meeting with him, which was unanimously accepted.

A vote of thanks was extended Dr. and Mrs. Smith for their entertainment, and they were assured that the Society would be glad to meet with them again next year.

JEFFERSON COUNTY

(Reported by T. J. Cunningham, Sec.)

The Jefferson County Medical Society met June 3, 1930, with the following members present: President Gurney, McMullen, Hankinson, Spillyard, Davidson, Power, Lemons, Shelton, Higginbotham, Capel, John, Gill Tankersley, Crump, Hays, Hughes, Smith, Woodul and Cunningham.

Dr. Capel reported a case of ruptured uterus.

A motion to elect Drs. Troupe and Blankinship as honorary members of the Jefferson County Medical Society carried and the Secretary was instructed to notify them of their election.

Charges of unethical contract practice were reported by the Board of Censors against Dr. J. C. Beard. A motion to receive the report of the Board of Censors was carried.

A motion to expel Dr. J. C. Beard from the Jefferson County Medical Society was lost.

JEFFERSON COUNTY

(Reported by T. J. Cunningham, Sec.)

The Jefferson County Medical Society met in regular session, September 2, 1930, with the following members present: President J. O. Gurney, George A. Hays, M. A. Shelton, O. C. Hankinson C. K. Caruthers, W. T. Lowe, J. W. John, C. B. Capel, J. C. Higinbotham, J. F. Gill, J. M. Lemons, J. C. Beard, W. G. Pittman, T. W. Woodul, J. F. Crump and T. J. Cunningham.

Dr. J. F. Gill read a very interesting paper on Typhoid Fever which was discussed by several members of the Society.

Dr. George A. Hays reported that there were eleven cases of typhoid fever in Pine Bluff all of which originated elsewhere. He also reported that there were twenty cases of typhoid fever outside of Pine Bluff in Jefferson County. Dr. Hays and his staff have given typhoid propolactic vaccine to approximately fifty-five hundred persons up to the present time.

Charges again having been preferred against Dr. J. C. Beard for continuing unethical lodge practice, the Board of Censors reported that they found him guilty as charged.

A motion by Dr. Hays, seconded by Dr. Lowe, was made that the Society receive the report of the Board of Censors. Motion Carried.

A motion by Dr. Crump: "Inasmuch as Dr. J. C. Beard has been found guilty of unethical conduct by practicing for the Eagles Lodge, I move that the said Dr. J. C. Beard be expelled from the Jefferson County Medical Society." Motion seconded by Dr. Lowe. Whereupon a ballot was taken, and the motion carried unanimously.

Several votes were cast by proxy, and to settle the legality of the proxies, Dr. Lowe made a motion, seconded by Dr. Hankinson, to strike out the votes by proxies. The motion carried.

TRI- COUNTIES MEDICAL SOCIETY

(Reported by T. H. Jones, Sec.)

The Tri-County Medical Society, composed of Union, Ouachita and Columbia Counties, met at the Camden Country Club, Camden, Thursday night, September fourth. The meeting opened with a banquet and musical entertainment. Forty-three physicians were present. Dr. J. B. Jameson of Camden delivered the address of welcome.

The scientific program was as follows:

Cardiolysis: Case Report—By Dr. R. B. Robins of Camden.

Modern Treatment of Syphilis—By Dr. M. S. LeDoux of Shreveport.

Diseases of the Colon—By Dr. R. G. Douglas of Shreveport.

Tuberculosis—By Dr. J. D. Riley of Booneville.

The next meeting of the Society will be held in El Dorado, in January, 1931.

MICROSCOPE WANTED: Will buy a microscope if in good condition. Write particulars, price, etc. Address, J. A., in care Journal of the Arkansas Medical Society, 814 Boyle Building, Little Rock.

ADV.

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SOUTHERN MEDICAL ASSOCIATION

Louisville, Ky. Nov. 11th-14th 1930

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Original Articles

SUBDIAPHRAGMATIC ABSCESS*

H. W. Hundling, M. D., F. A. C. S.
Little Rock

A subphrenic or subdiaphragmatic abscess is a collection of pus beneath the diaphragm, that is, in one of the spaces between the diaphragm above, and the transverse colon and mesocolon below. The abscesses are classified as right or left, depending on their relationship to the suspensory ligament of the liver. Those on the right may be in front of, behind, or between the layers of the coronary ligament, while those on the left most commonly lie between the diaphragm, the stomach and the spleen, although they may lie between the diaphragm and the left lobe of the liver.

Nather and Ochsner give a simple classification of the various spaces which is worthy of mention. In addition to right and left and upper and lower spaces, their classification includes the following:

1. The right upper posterior space located on the posterior lateral surface of the liver, between it and the diaphragm.

2. Right upper anterior space located between the upper liver surface and the diaphragm, anterior to the right triangular ligament.

3. Left upper space located between the liver and diaphragm on the left side.

4. Left lower posterior space, that is, the lesser peritoneal cavity.

5. Left lower anterior space beneath the liver and anterior to the lesser omentum and stomach.

6. Right lower space located on the under surface of the liver to the right of the lesser peritoneal cavity.

An abscess on the left side may form a great collection of pus, for its margins are less confining and are usually limited by adhesions of the great omentum to the anterior abdominal wall. For this reason the diaphragm is not raised as quickly on the left side as on the right, where the abscess is confined and cannot enlarge without interfering with the diaphragm and encroaching upon the thorax.

The subphrenic space may become infected in several ways:

1. Direct extension of peritonitis from elsewhere in the abdomen, frequently resulting from a duodenal or gastric ulcer, although the abscess may be the residue of a diffuse peritonitis.

2. A blow or injury, with local irritation and infection.

3. Infection through the blood stream.

4. Direct extension from a neighboring viscus, as in the rupture of a liver abscess.

5. Lymphatic distribution.

(a) Extension of inflammation of the retroperitoneal tissues, starting from the appendix and mesoappendix with implication of the cellular tissues lying behind the peritoneum in the right lumbar gutter.

(b) Extension by the diaphragmatic lymphatics of which the supra and infra-diaphragmatic plexuses intercommunicate freely. In other words, pus under pressure above the diaphragm may spread through to the subphrenic spaces, but extension in the opposite direction is more common.

(c) The lymphatics along the superior and the deep epigastric vessels communicate with those in the falciform ligament.

Subphrenic abscesses on the right side are most commonly secondary to appendicitis, and the infection may occur in one of three ways:

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

1. Intraperitoneally along the ascending colon to the liver, resulting in intraperitoneal abscesses, which constitute about one-half of the cases.

2. Infection ascends to the liver in the loose retroperitoneal tissue posterior to the ascending colon, in which case the abscess is retroperitoneal.

3. From pyelophlebitis originating in the mesenteric veins, resulting in a liver abscess which later perforates into the perihepatic spaces.

In addition to appendicitis, right-sided subphrenic abscesses may be secondary to suppurating echino-coccus cysts, injuries to the liver, cholecystitis, cholangitis, and perforated peptic ulcers. On the left side abscesses are most commonly due to perforated gastric or duodenal ulcers, or perforation due to traumatism, and less commonly to injuries and abscesses of the spleen, inflammation of the tail of the pancreas, perforation of the esophagus or transverse colon, and lesions of the left lobe of the liver. Either the right or the left side may be involved from such lesions as empyema of the pleura or pericardium, diffuse peritonitis, perinephritis, and diseases of the ribs and vertebra.

Following an operation for a badly infected or retroperitoneal appendix or an appendiceal abscess, if the patient does not have a normal convalescence, a subphrenic abscess should be considered. This is especially true if the temperature remains high or rises without apparent cause, leucocytosis is marked, there is lack of appetite, sweating is profuse and prostration is marked. Later on pains and localizing symptoms will aid in making a diagnosis. In the upper abdominal disasters such as the perforation of gastric or duodenal ulcers, the development of a subdiaphragmatic abscess must always be kept in mind. If an abscess develops gradually, in the absence of any demonstrable infection elsewhere, the diagnosis may be very difficult.

The typical case of subdiaphragmatic abscess will present symptoms of sepsis, as evidenced by elevation of temperature, profuse sweating and prostration. A chill may be an early symptom, and the leucocyte count is usually high. There is loss of appetite and early wasting. Pain is frequently present early, especially between the eighth and eleventh ribs in the mid-axilliary space, and occasionally beneath the scapula. Due to the upward pressure of the diaphragm, the pain is sometimes referred to the neck. Tenderness may be present over the abscess, and not infrequently an area of localized edema develops. Respiratory movements along the costal margin are absent, and the diaphragm may extend as high as the second rib. As the pressure increases there is considerable downward displacement of the liver. Physical examination of the lower chest will reveal dullness with diminished breath sounds and an occasional friction rub. The upper margin of the dullness is convex, in contradistinction to pleural effusion, in which case the upper border is concave. A respiratory murmur is usually heard below the line of dullness since the lung lies between the diaphragm and the thoracic wall.

In view of the fact that this condition was first described by Barlow of England and Leyden of Germany, it is worth while to give their clinical description. "Above the liver dullness is found a tympanitic zone which in turn is covered by a zone of dullness produced by a pleural exudate. The tympany results from free gas in the peritoneal cavity, which is found in only about one-third of the cases with abscesses in the subphrenic region." It must be borne in mind, however, that the tympanitic zone may be produced by a highly situated gas distended transverse colon. As a rule the signs are not so pronounced on the left side, because there is not so much displacement of the diaphragm.

From the standpoint of differential diagnosis, such conditions as empyema of the pleural, pleural effusion, liver abscess, perinephritic abscess and pylephlebitis must be carefully considered. In the case of a liver abscess the liver is usually enlarged rather than displaced and there is a change in contour.

The Roentgen-ray examination is of marked assistance in confirming the diagnosis of subdiaphragmatic abscess. Fluoroscopic study reveals an immobile diaphragm which is bulged upward while the liver is depressed. If gas is present a shift in the position of the fluid may be demonstrated by changing the position of the patient.

As a means of confirming the diagnosis aspiration may occasionally be done if the patient is prepared for immediate operation, for contamination of the pleura may result. Aspiration beneath the level of the pleura may be carried out with less danger. In this case the needle is inserted in the posterior axillary line at the level of the first lumbar spinous pro-

cess, and is directed upward and backward at an angle of less than forty-five degrees. Certain signs will help to determine the location of the needle during aspiration. A needle above the diaphragm does not move with respiration, while a needle through the diaphragm does. Fluid from the pleura will escape more rapidly during expiration, while from the subphrenic space it will escape more rapidly during inspiration. If the lower pleura has become adherent to the diaphragm, as is frequently the case, aspiration may be done with safety, but this usually cannot be determined until the time of operation.

On the right side the pleura probably becomes infected secondarily in about sixty per cent of the cases. Perforation of the diaphragm occurs but rarely. Occasionally there occurs a perforation of the lung with the production of multiple abscesses or gangrene; perforation into the stomach or colon; or rupture into the peritoneal cavity, in which latter condition the outcome is usually rapidly fatal. As a rule the pus is foul and contains necrotic material. Gas may be present because of the presence of gas forming bacilli or from the perforation of a hollow viscus. Colon bacilli are frequently found, and likewise staphylococci, streptococci, and other organisms.

In the non-operative cases the mortality is about eighty per cent, while in the operative cases it ranges from twenty to thirty per cent, and is frequently lower if the condition is treated early. Recovery in the non-operative cases sometimes results from a perforation of the abscess into a bronchus, thus allowing free drainage of the abscess.

The treatment consists in prophylactic, conservative, and surgical measures. From the prophylactic standpoint posture is of great importance, especially in post-operative cases where collections of pus are apt to accumulate under the diaphragm, as in cases with an appendiceal abscess. Fowler's position may be of considerable value in encouraging drainage toward the pelvis. Following operations on the gall-bladder and other upper abdominal structures, it may be wise after the first week to turn the patients over several times a day.

Conservative treatment consists in building up the patient's resistance, applying heat locally, and strapping the side if necessary. Usually, however, these procedures are of little avail.

Surgical treatment may be instituted in several ways. Closed drainage has been tried by inserting a tube into the abscess cavity with a trocar, and using suction and Dakin's solution for irrigation. Lipiodal can be used nicely in these cases to estimate the diminution of the size of the cavity under treatment.

The abdominal approach is well adapted to collections of pus on the right side, anterior to the coronary ligament and near the costal margin, and also, to most of the cases of left subphrenic abscesses. It should not be chosen, unless there is evidence, such as bulging, edema, or tenderness, that the abscess approaches the abdominal wall. The incision is made along the free border of the ribs at a point where the abscess is nearest the surface. If adhesions are present it is safe to proceed, but if not, the abdominal cavity is walled off and large drainage tubes are inserted. Should a viscus be perforated, the opening should be closed if possible.

Drainage of a subphrenic abscess on the right side is frequently accomplished by the transthoracic route, by removing two to three inches, usually of the ninth and tenth ribs, between the anterior and posterior axillary lines. Two means of approach are available. Either the pleura may be stripped up and the diaphragm opened, or if adhesions are present, the pleura may be opened and the diaphragm incised. If adhesions are not present, the pleura should be closed off by suture, after which the diaphragm may be incised and drainage instituted. Should the pleura be opened during the operation, gauze packing should be used to aid in forming adhesions, and the second stage of the operation postponed until adhesions have formed.

Not infrequently, especially following appendectomy, a double abscess may develop, one above and one below the liver. Under these circumstances a subperiosteal resection of the twelfth rib offers a good approach through which both abscesses may be drained. Should an empyema of the pleura be present also, this can likewise be drained through the same incision.

In dealing with very obscure cases in which it is difficult to arrive at a diagnosis, it is always well to remember the aphorism—Pus somewhere, pus nowhere else, therefore, pus under the diaphragm.

REPORT OF A CASE

A white boy of fourteen with a negative family history had an attack of typhoid at four years of age. He was run over by a truck seven years ago and suffered a fracture of the right femur, which was reduced by open operation with a good result. Except for an occasional attack of indefinite non-localizing abdominal distress, the patient had been in good health the past few years. On April 28, 1929, after a meal of fresh vegetables and strawberries, he complained of epigastric soreness which seemed to localize in the right upper abdomen the following day, when the temperature rose to 100 degrees. Two days later there was some nausea and vomiting, and the entire abdomen was somewhat rigid, but there was no localization of tenderness. A short time later he complained of being cold, had a pain in his shoulders, difficulty in breathing, and marked prostration. Although we suspected an intra-abdominal disaster, we were unable to definitely localize the lesion and thought the symptoms possibly secondary to an atypical pulmonary condition. The following day there was dullness over the right lower chest with a friction rub. The temperature was 102, and the course after this not unlike pneumonia, falling by crisis four days later, with marked improvement of all symptoms. After three days of comfort a typical septic temperature developed, ranging from 101 to 103 degrees. X-ray examination at this time revealed immobility of the right diaphragm, which was elevated to the level of the fourth rib, and marked depression of the liver. A large gas bubble was present above the liver.

On May 21st under ethylene anesthesia two and one-half inches of the right ninth and tenth ribs were resected in the mid-axillary region. The visceral and parietal pleura were sutured, the diaphragm incised and 500 c. c. of creamy colon bacillus pus was removed from the subdiaphragmatic space. Two large rubber tube drains were inserted, the last of which was removed on June 7th, and two weeks later the wound was completely healed.

Several months after the operation x-ray examinations of the gall-bladder, stomach, and duodenum were made and were reported negative. It was felt that a high lying retro-cecal appendix probably was responsible for the abscess formation, and appendectomy was performed under ethylene anesthesia on December 19, 1929. Through a right rectus incision, an incomplete rotation of the bowel was noted. The cecum was located directly beneath the liver and was firmly bound down, with marked induration along its posterior surface. In the indurated area was found a markedly thickened retro-cecal appendix, the tip of which reached to the lower border of the liver, and contained a concretion measuring 1 x 1½ c. m. The liver margin was entirely sealed off by omentum, and the stomach and duodenum were not explored. The patient made an uneventful recovery and is now perfectly well.

CONCLUSIONS

A subdiaphragmatic abscess must be considered when a patient does not recover normally following an abdominal operation, especially if pus was present.

The Roentgenray is invaluable in making a diagnosis of subphrenic abscess.

If the physical signs are typical, an accumulation of pus under the diaphragm may be detected quite readily.

Treatment of a subdiaphragmatic abscess is practically always surgical.

Early treatment will help materially in lowering an otherwise high mortality.

DISCUSSION

DR. FRED KROCK, Fort Smith: I certainly enjoyed Dr. Hundling's presentation of this timely subject. I would like to take this opportunity to briefly describe one of the rarer terminations of subphrenic abscess mentioned by Dr. Hundling which occurred in our practice recently. In this case, what had evidently been a subphrenic abscess perforated into the pleural cavity and then into the right lung. This patient had an appendectomy for gangrenous perforative appendicitis with a history of forty-eight hours. He got along fairly well for five or six days and then developed a gradually increasing intestinal obstruction with enormous distention. On the fifteenth day an enterostomy was done which functioned well and soon relieved the distention. He again began to improve for four or five days and then began to have an unproductive cough. There was a continuous elevation of temperature daily to 101 degrees. A few moist rales could be heard in the right lung. On the twentieth day of his illness, a roentgenogram showed a soft infiltration of right lung interpreted as tuberculosis. There was no marked elevation of the right diaphragm or other characteristic signs of subphrenic abscess. On the twenty-fifth day after operation he suddenly coughed up 500 cc. of blood. The following day a sputum examination was made which revealed pus and colon bacilli. On this night he had another massive pulmonary hemorrhage and expired. Necropsy was not permitted. However, the diagnosis seems clear that

he had an unrecognized subphrenic abscess which eventually perforated the diaphragm and found its way into the lung, finally eroding a large vessel.

DR. M. D. OGDEN, Little Rock: Dr. Hundling's very excellent and comprehensive paper covered the subject of subphrenic abscess very thoroughly and gives a chance, I think, to draw a couple of corollaries from it. One of them is what we have argued in this society for many years, viz., the question of the time to operate on a case of appendicitis. I have seen in several instances, cases of subphrenic abscess occurring before operation due to delay in the time of operation for acute appendicitis. At least in three of these cases this was not due to delay in recognition of the disease, but in waiting, as the attending physician said, until it was ready for operation. I will not start that argument today about when acute appendicitis is ready for operation because we would not finish by the time the session was over.

I saw last year one case of a subphrenic abscess which was unusual and which I just mention because it adds one cause to the list which Dr. Hundling mentions. A man 40 years old came complaining of left subcostal pain with some swelling and tenderness. The x-ray examination was negative as to distortion of the left diaphragm. The physical examination was entirely negative. The symptoms were those of an infection, so, suspecting a liver abscess, I opened him up. I found a moderate sized left subphrenic abscess which healed very promptly after drainage. Just before leaving the hospital, about two weeks later, he complained of his rectum. An examination then, which ought to have been made in the first place, showed a very large infected hemorrhoid with a purulent center, which was opened and drained; a thrombotic infected internal hemorrhoid. I assume that the abscess came from the infected hemorrhoid, originating as Dr. Hundling mentioned, in a liver abscess in the left lobe which perforated under the diaphragm. I was so interested in the condition in the upper abdomen that I neglected entirely to make a rectal examination, which I do not think ought to be neglected under any circumstances.

DR. H. D. WOOD, Fayetteville: I was very much interested in the reading of this paper. Nearly fifty years ago, it fell to my lot to look after a boy just entering his teens that had a severe pain in his right side. He developed a swelling. I thought he had a subphrenic abscess. It went on for several days until I thought it had to be opened. I called my friend, Dr. Gregg, who may be here today, in consultation, thinking we would open that abscess, but that's a long time ago, and we were young men then. He thought it would be best to wait another day. So that night an abscess opened through his lung and they reported to me the next morning that a pint of pus had been expectorated during the night. The boy began to improve and got as well and as strong as any other boy in the neighborhood. We wouldn't allow that to go on now; we would be doing something for him earlier.

ROENTGEN RAY DIAGNOSIS OF UROLOGIC CONDITIONS*

H. King Wade, M. D., and
H. Clay Chenault, M. D.

Hot Springs National Park

There are probably no two specialities in medicine more closely related than Urology and Roentgenology. The many advances in Urology are no doubt due in great part to refinement in roentographic technique. They are indeed the Damon and Pythias of medicine and the modern urologist considers the roentgenray one of the most important means of visualization of the G. U. tract. The pioneer urologist before the advent of the roentgen ray depended on a more highly developed tactile sense. Possibly the first diagnostic work with the roentgen ray was on lithiasis and for a period of time was limited to this condition. McIntyre in 1896 made the first positive roentgen ray diagnosis of lithiasis after an exposure of twelve minutes. His diagnosis was subsequently proven at operation. Among the pioneer urologist to increase the scope of the roentgen ray was Tuffier who in 1897 suggested the use of the opaque ureteral catheter. This work was closely followed in 1901 by Schmidt Kolisher who independently published roentgenograms of the ureter which were secured by placing a wire in a ureteral catheter. Fenwick in 1905 suggested the use of a ureteral catheter whose walls were impregnated with lead. Vaeleker and Lichtenburg in 1906 were the first to demonstrate successfully the complete outline of the pelvis of the kidney and the ureter. They used colloidal silver. Many preparations were used with fair success to delineate the urogenital tract. Most of these solutions were injected into the kidney pelvis with a hand syringe and frequently severe reactions followed, especially with the silver preparations. It was later found that a severe parenchymal destruction resulted, due in part to the media and to undue pressure exerted by the operator. This led to a suggestion by Baker in 1910 of the gravity installation of the pyelographic media. This method has been elaborated to the point where the urologist injects the media and an instrument records the exact pressure exerted. The early workers

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clearly saw the limitation of the simple roentengram and Fowler in 1912 recommended the use of the erect position whereby the excursion of the kidney could be noted. Cameron of the Brady Urological Institute in 1918 was the first to use and advocate sodium iodide as a pyelographic media. Young and his coworkers were possibly the first to use integral cystoscopic and x-ray tables and soon out of their experiences was designed many tables which could be used both as cystoscopic and x-ray tables. These tables are adaptable to any position the operator desires and can be quickly changed from one to the other. The Potter Bucky diaphragm which was designed to minimize secondary radiation and make possible the delineating of soft parts soon was added to the combined table. Stereoscopic roentgenograms were made possible by the use of double intensifying screens on the film holders and the use of the tube stand which is an integral part of the combined table.

The first practical application of pyelography was made in the diagnosis of hydronephrosis and various types of tumors. It was Braasch of the Mayo Clinic who is the real pioneer in pyelography and who suggested in a series of articles in 1912-1913-1914 the use of pyelography in the diagnosis of (1) normal kidney pelvis, (2) hydronephrosis, (3) pyelitis, (4) pyronephrosis, (5) renal tuberculosis, (6) renal tumor, (7) renal and ureteral anomaly, (8) polycystic kidney disease. Monumental work was done about this time by other urologists, especially in the diagnosis of inflammatory diseases of the urogenital tract. The first consideration should be lithiasis because it is on account of stone that the greater number of patients are referred to the urologist. Renal stones vary in size from the smaller uric acid calculi to the massive stone which has entirely replaced the parenchymatous substance of the kidney. The size, position and number may be correctly diagnosed and be of great aid to the surgeon. At operation an x-ray film may be made of the kidney after the stone has been removed. This frequently helps the surgeon, especially if a subsequent stone is formed in the same kidney. Ureteral stone follows the partial passage of a calculi from the kidney. The position, size and differential diagnosis may be ascertained with the roentgen ray. The urologist in intra-ureteral manipulating may push the calculi back into the kidney pelvis or may facilitate its passage into the bladder. In such operation it is of great importance to know the exact position of the stone at all times. A differential diagnosis may be made with a ureteral catheter in place by taking two exposures on the same film and shifting the x-ray tube between exposures; or stereoscopic films may be made and the shadow of the stone may prove to be a calcified lymph gland or an enterolith and extra-ureteral. Vesicle calculi may be single or multiple. The x-ray film here is of great diagnostic significance for the roentgen ray and cystoscopic study frequently result in a decision that the calculi may be crushed and removed per urethra, or open operation be resorted to for the removal of the calculi. Prostatic calculi are rare, but are met with and present a very annoying condition for the urologist. Inflammations of the kidney pelvis are diagnosed roentgenographically by means of pyelograms which are made by passing the ureteral catheter to the pelvis and injecting pyelographic media. The solution fills the pelvis and extends to each calyx and the pyelogram outlines the character of the pelvis and calices. The pyogenic infections of the kidney leave a tell tale dilatation of the true pelvis and clubbing of the calices. At times a cicatricial contracture of the calices may occur, but generally there is associated pelvic dilatation. This inflammatory reaction may extend down the ureters with a resulting ureteritis and dilatation or stricture may result. Renal tuberculosis is frequently diagnosed in its incipiency with the pyelogram. The most characteristic changes are cortical necrosis which manifests itself in a moth eaten appearance of one or more of the calices. There may be a complete obliteration of one of the calices and stricture of the ureter is frequently present.

Tumors whether renal or extrarenal are diagnosed with the roentgenogram. The most consistent changes present in renal neoplasms are elongation of the calices with flattening and destruction of pelvic outline with frequent filling defect with obliteration of the true pelvis. Deformity of the upper portion of the ureter is frequently met with in neoplasm of the kidney. The roentgenographic diagnosis of polycystic disease of the kidneys may be made from the pyelogram. The findings are obliteration of pelvis and calices due to compression of cysts. The outline may be cresentric. There is a marked enlargement of the renal shadow and an elongation of the calices. In monocystic formations there is

only a single area of compression and the resulting deformity is dependent upon the size of the cyst. Extrarenal tumors are diagnosed chiefly by their effect on the kidney outline. The tumor mass may push the kidney in any direction. The findings depend upon the size of the tumor and the direction of its extension. Tumors of the pelvis are met with frequently in gynecological practice and frequently the urologist can aid the gynecologist in locating the tumor, especially by means of the cystogram. Hydronephrosis was possibly one of the earliest conditions diagnosed with the use of pyelographic media. It is best described by determining the degree or amount of pyelographic media the pelvis will contain. Many unusual and bizarre shadows are shown, depending upon the degree of involvement and parenchymal destruction. There is no condition in urography that can be more clearly demonstrated roentgenographically than renal ptosis. The modern urological x-ray table makes the diagnosis certain and scientific in that the exact excursion of the kidney from the dorsal to the vertical position may be clearly shown by exposing films in either position, after the kidney pelvis and ureter are injected with the pyelographic media. Those unusual double pelvic or double ureter cases are demonstrated by pyelograms with ureteral catheters in place, as that of horse shoe kidneys and many other congenital conditions met with in urology. The massive congenital hydro-ureters and hydronephrosis some times met with in children may be demonstrated at times without the aid of the cystoscope by simply placing the patient in the Trendelenburg position and injecting the bladder with the media, which regurgitates into the enlarged ureter and pelvis, the resulting film outlining the whole urogenital tract. Vesiculography may be accomplished by injecting the ejaculatory ducts with one of the Halogen oils and the patency of the vesicles and ducts are clearly outlined on the x-ray film.

To Summarize:

(1) Urology and roentgenology are inseparable from a urological diagnostic standpoint.

(2) Modern urological x-ray equipment is essential in diagnosis of urological conditions.

(3) The urologist may assist in the diagnosis of obscure surgical and gynecological conditions by means of the roentgen ray.

(4) The x-ray is invaluable in the pre-surgical location of calculi in the G. U. tract.

DISCUSSION

DR. H. FAY H. JONES, Little Rock: I thoroughly enjoyed Dr. Chenault's presentation of this important subject. Roentgen rays are as important to the urologist as the knife is to the surgeon.

There is one point that I wish particularly to stress and that is pelvic lavage with sterile water following pyelography. This procedure eliminates most of the post-cystoscopic reactions, which are caused by the sodium iodide draining back into the bladder.

The slide Dr. Chenault showed you of the horseshoe kidney was most interesting. I reported this case at the meeting of the Southwestern Branch of the American Urological Association in Dallas last December. In this case I did a heminephrectomy with excellent results. This was necessary because of multiple calculi and pyonephrosis in the left half of the kidney.

DR. G. W. REAGAN, Little Rock: I enjoyed Dr. Wade's paper and presentation. He has shown that urology has almost become an exact science by the use of the x-ray.

We feel that urology is more an exact science than any other branch of medicine with the use of the x-ray and cystoscope.

There is one thing I would like to call attention to in making a ureteropyelogram, that is by the use of the Woodruff catheter. It is a large catheter and you can insert it into the ureter and inject the solution through this and fill the ureter and pelvis and you get a good ureteropyelogram, and I think certainly it is worth using in cases where you want to get a good uretrogram as well as a pyelogram.

DR. WADE in closing: I do not feel that I can add anything to what has been brought out in this paper and the discussions of Dr. Reagan and Dr. Jones. I wish to assure you that Dr. Reagan's statement that urology has almost become an exact science is true, and this has been greatly brought about by the intelligent use of the x-ray in urological conditions. In fact, we could not get along in urology any more without an x-ray than we could without a cystoscope, and by the aid of the x-ray and the use of the cystoscope a very accurate diagnosis can be made.

INFANT FEEDING*

J. W. Fleming, Jr., M. D., Smackover

In presenting this paper, I feel that an apology should be first in order as I am not a Pediatrician. However, I am constrained to believe that the subject is being accorded a consideration at the hands of the general practitioner not commensurate with its importance.

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

My remarks will be entirely elementary, intended to deal, not with the difficult cases of feeding but to present an avenue of approach to the intelligent consideration of normal cases through the medium of caloric values and percentage feeding, given to us in 1908 through the arduous labors of Thomas Morgan Rotch of Boston.

With these principles well established and applied to normal cases, I feel there would be a material reduction in the more severe conditions with which we are confronted.

Though our knowledge may be admittedly limited and there may be some confusion in the face of so many differences in method, still I am unwilling to concede its status as inexact as considered in some quarters and even stated in the text books.

Breast Feeding and Artificial Feeding

I am not unmindful of the importance of breast feeding, but shall devote relatively little time to it in order to keep the paper within due confines, but shall stress a few of the most important principles.

Of course, mothers, the victims of chronic infections such as tuberculosis, nephritis, decompensated heart lesions, pellagra, anemia, in fact, anything rendering them physically unfit, should not attempt to nurse their babies but barring these contra-indications and given a woman free from extremes in temperament and unhampered by environment, there are probably few of them morally entitled to shirk the responsibility of nursing and run the risk of jeopardizing the future of their off-spring.

I believe it is conceded that five or six times as many artificially fed babies die as those breast fed and surely it is a matter of common observation that a breast fed baby is blessed with a resistance that affords it a greater immunity to the ordinary things such as colds, tonsilitis, skin affairs and gastre intestinal upsets.

The first few days of a babys life is an extremely important period and food should be withheld until the appearance of mothers milk or her inability to nurse, is determined, nothing but tepid water being given and certainly not sugars.

Aside from this phase of early management, the things most important in my experience are regularity and amount. I am unwilling to say that any ironclad schedule is a necessity for success in breast feeding, but I do think it is desirable for the mother as well as the infant and I am further constrained to believe that many babies are deprived of their food supply by having their nursing periods unduly prolonged. Rarely do I have the feeding intervals longer than three hours and not so long in the earlier weeks of life.

Of course there is only one way to systematize them and that is to awake them at regular intervals and if they refuse to nurse, let them go until the next nursing times comes around. A little perseverance and co-operation from the mother will enable you to institute a regular schedule with small effort.

The next in importance is the amount taken. Ordinarily it takes about 15 minutes for a baby to empty its mothers breast and if it is getting too much food, the nursing time should be cut to 8 or 10 minutes, leaving some residual milk at each nursing which will automatically retard the secretion.

The fellow who is having his digestive capacity overtaxed usually voices his protest, though he is incapable of reasoning the cause and is soothed by the nursing act. As a class, they are quite unhappy, constipated, the stools are large and contain curds and in most instances their rate of gain in weight is abnormal. Many mothers think crying babies are always hungry and you will have many mental skirmishes with them in dealing with the problem of over-feeding.

In the underfed there may be few symptoms other than failure to gain in weight, constipation with small stools and an appealing expression that experience enables one to recognize. In these cases supplementary feeding with properly prepared formulas of artificial food is the ideal to be attained.

Having covered these few points in breast feeding very briefly, we now arrive at the place where the baby in most cases has already been taken from the breast and here we may inquire into the reasons, for many of them have been deprived of their natural food supply upon insufficient grounds.

Eliminating those cases intelligently handled, probably the most frequent cause of stopping of breast feeding is over-feeding with the symptoms just enumerated. If the abuse has existed for some time an actual loss of weight may occur due to indigestion and non-assimilation, not withstanding the fact that the infant may be getting two or three times the required amount of food.

Probably the next cause in importance, is the enormous respect that people have for artificial feeding and advertised foods. I am unwilling to believe that many mothers deliberately surrender to selfish impulses where their babies are concerned, but do believe that they feel that their interests are being conserved by an artificial food.

The last I shall mention is the sins of the profession in giving their consent for the change, which is done in many instances because of the literature furnished by the food manufacturers and some are supplied with an abacus that will enable you to construct, without mental effort, a formula applicable and appropriate to most any type of case you could anticipate.

General Principles of Artificial Feeding

In considering artificial feeding, it must be remembered that only a few elements are contained in the food and that, briefly, in our dealings with the problem we are concerned with but three, which are: fats carbohydrates and proteids; carbohydrates comprising sugars and starches. Further it must be remembered, the baby must have a sufficient amount of food. This amount should not be calculated, however, in ounces or pints, but in food values or calories.

A baby must receive a sufficient number of calories in proportion to its body weight in order to thrive; further, it must contain a sufficient amount of proteid to cover the nitrogenous needs of the baby and last it must be fitted to the digestive capacity of the infant to whom it is to be given.

These fundamental principles should be taken into consideration in calculating every formula and if they are ignored or any one of them ignored, failure, rather than success, is liable to be the reward for your efforts.

Of course, we are not contending that there is a fixed set of rules which will enable you to feed babies. We realize that every venture is an experiment; however, there are certain aids that we can command which will contribute greatly to the intelligent management of a given case in getting started and will aid us greatly in an orderly proceeding after the experiment is under way.

The percentage of elements in human milk are known and appreciated and it is accepted that it is practically uniform in strength and composition during the entire nursing period and it would seem that an artificial food simulating it in these respects would be ideal. That holds true in some cases, but there are many cases where a weaker food is desired in the earlier weeks and months while a stronger food is required in the latter months.

The composition of human milk does, however, teach us certain things as to the digestive capacity of the infant and general principles in the preparation of a food to meet this digestive capacity. Nature provides a dilute food, rich in fats and carbohydrates and low in proteids; and is, relatively rich in heat and energy producing substances and low in tissue producing substances, therefore it would seem reasonable that a food of this type would be suitable for the infants digestive power and metabolic processes.

Accepting these standards, we believe, a baby's first food should be dilute and low in fats and proteids. Should the baby fail to thrive, it should be discarded and a food fitted to its needs and digestive capacity supplied.

Cows Milk

Nearly all baby foods have the milk of some animal for its base and for practical purposes the milk of the cow will interest us. The different breeds of cows is of some importance and in some of the dairies of the country supplying milk for babies, few Jersies are used and in these cases, it is usually to bring the product up to the State standard in the matter of fat percentages. However, in private practice many men are using Jersey's milk with success. It is desirable to use herds milk rather than the milk of an individual cow as a marked variation in the percentages of the elements in the milk of one, would be only slightly reflected in the milk of the herd.

Feeding in Percentages

The most satisfactory way of determining the composition of an infant food is thinking and calculating in terms of percentages of elements contained in the food. It is not a method of feeding, but a method of calculating and a means of attaining relative accuracy in the preparation of a food. In no other way is so accurate results obtained; however, it is not claimed that the mixture contains the exact percentages calculated, but is approximately correct, in any event relatively correct.

The Use of Calories in Infant Feeding

A baby cannot thrive unless its food contains a sufficient number of calories in proportion to the body weight and they must be in utilizable form. It requires about 35 calories per pound body weight to maintain life

and I find few babies in this climate who can take more than 50 calories per pound body weight for any considerable length of time. The fatter the baby, the fewer calories he needs.

An under-nourished baby should receive more as well as a very active one, and the extremes in cold climate require additional calories to provide heat.

Feeding Intervals and Amount of Food at Each Feeding

It has already been stated that no arbitrary rule prevails as to necessary intervals in breast feeding and while highly desirable, many babies probably thrive otherwise, however, this proposition will not obtain in artificial feeding as they are almost certain to be upset and have disturbances of digestion, unless fed at regular intervals.

The intervals should vary with the amount and composition of the food, also the digestive capacity of the baby. It is obvious that if a large amount of food is given, the intervals should be longer. Foods rich in carbohydrates but low in fats and proteids leave the stomach more quickly hence it is desirable to feed these high carbohydrates mixtures at more frequent intervals.

In breast feeding, babies may get a great deal more food at one nursing, than at another and thrive, but in artificial feeding, experience has proven that it is desirable to figure your 24-hour formula, providing for one additional feeding as a reserve for emergencies and accidents, and then to divide into the required number of feedings. The composition of the food, calorie value and weight of the baby, would cause the amounts to vary. The average baby will take an ounce and one-half at the end of the first week, two and one-half ounces at the end of the first month, four ounces at three months, six ounces at six months, and eight ounces at eight months.

The first month usually feed at two hour intervals or ten feedings in 24 hours, skipping two night feedings. Until the fourth month, two and one-half hour intervals, eight feedings in 24 hours and after this time, three hour intervals with seven feedings in the 24 hours.

Composition of Food at Different Ages

	Fat	Sugar	Proteids
First Food	1%	5%	.50
First Week	2%	6%	.75
One Month	3%	7%	1%
Two Months	3%	7%	1½%

After this time, the fats and sugars remain stationary and the proteids are increased about one eighth of one per cent each month. In some babies it is desirable to give higher fat percentages, but caution should be observed.

Fat

Very few babies can take more than 4 per cent fat. Experience has proven that it is safer to use three to three and one-half per cent, especially in home modification. Contrary to the general belief, fat is not a laxative, but is one of the most frequent causes of constipation. The calorie value of fat is so great, that it is desirable, where there is no intolerance, to use it rather liberally to keep the total quantity of mixtures reasonably small.

Sugar

No more than seven per cent of sugar can be fed for any considerable length of time and in my experience with normal cases the type used is not of cardinal importance, though I am somewhat prejudiced against cane sugar.

Proteids

This is the one element in the food that cannot be dispensed with. It is absolutely necessary for the baby to have a definite minimum amount, as it supplies the material for the growth and repair of worn out tissues. New tissue cannot be formed from carbohydrates and fats, but life can be maintained for considerable periods of time on proteids alone. About nine-tenths gram per pound body weight is required daily. It is not advisable to give unnecessary amounts of proteid as its elimination is an added burden for the emunctories.

Prescribing of Modified Milk

The first thing to do is to determine what percentage of fats, carbohydrates and proteids are to be used in the mixture. After these points are settled, the number of feedings and the amount of each feeding. Now take the twenty-four hour quantity and calculate the calorie value and amount of proteids to see if the calorie and proteid needs of the body have been covered or exceeded. Each one of these points should be decided every time a modified milk mixture is prescribed.

Materials to Be Used

Gravity cream and skimmed milk will be used in this method of calculation. By gravity cream is meant, all the cream that is vis-

ible on a quart of milk which has set for six hours or longer and its composition is: fat, 16%; carbohydrates, 4.50%; proteids, 3.20% All the cream must be removed and mixed thoroughly before the required number of ounces are taken from it and if the cream from one quart is insufficient, then the cream from two should be mixed and used. The cream may be poured off or removed with a cream dipper.

By skimmed milk is meant, the milk remaining after the cream has been removed and the bottom portion should be used. Its composition is: fats, 0; carbohydrates, 4.50%; proteids, 3.20%.

A rounded tablespoonful of milk sugar is equivalent to one-half an ounce, therefore in computing, we multiply by two in calculating the sugar percentages in a mixture and the resulting quantity is expressed in terms of tablespoonfuls.

I will construct a formula from a case in my file:

Imrey baby was born November 7, 1929; age now about 6 months, the present weight being 17 pounds. A desired mixture for this child would contain:

Fats, 3.50%; C. H., 7.00% P., 2.00%. There should be seven feedings of six ounces each in the 24 hours making the total mixture 42 ounces.

A short method of calculating the caloric value of a food is to multiply the fat percentage by two then add the carbohydrate and proteid percentages and multiply by one and one-quarter times the quantity—

2F plus C. H., plus P. X. 1¼ Q which in the above case would be:

3.50
2
———
7.00
7.00
2.00
———
16.00
1¼
———
20.00

calories, the value of one ounce or 20x42 equals 840 the caloric value of the entire mixture.

A baby weighing 17 pounds and getting 840 calories, would therefore, be getting approximately 50 calories per pound body weight which we consider correct in this case as this baby is a muscular child and very active.

This baby would need about a gram of proteid per pound body weight as a minimum or at least 17 grams in 24 hours. The 42 ounce mixture containing 2% proteid would therefore show .8-10 of an ounce or 26 grams which would be ample for the nitrogenous needs of the baby.

We are going to obtain the fat for this mixture from gravity cream which contains 16% fat and the amount is 3½%, obviously then, (3½-16) three and one-half sixteenths of 42 ounces would furnish the amount which would be,

7 1
—X—X 42 equals approximately 9 ounces of
2 16 (gravity cream.

The proteid in this mixture is to be obtained from the gravity cream and skimmed milk and the desired amount is 2 per cent. The gravity cream will contribute (9-42) nine-forty-seconds of 3.20, as it contains 3.20% of proteid, which will be approximately (60-100) sixty-one-hundredths per cent and as the amount desired is 2%, it is obvious that 1.40% must be obtained from the skimmed milk containing 3.20% proteid, therefore the skimmed milk required in the mixture would be:

140
——of 42 ounces or approximately 19 ounces.
320

The skimmed milk and gravity cream both contain 4.50% per cent carbohydrates, consequently, there being 28 ounces of these elements in the mixture they would contribute

28 9
—of—or 3 per cent of the sugar required,
42 2

and as 7 per cent is desired, it would be necessary to supply 4 per cent from other sources, is (4-100) four-one-hundredths of the 42 ounce mixture multiplied by two tablespoonfuls to the ounces or approximately 4 tablespoonfuls of milk sugar. The formula completed would read:

Gravity Cream	9 ounces
Skimmed Milk	19 ounces
Milk Sugar	4 tablespoonfuls.

Water sufficient, after boiling, to make the mixture measure 42 ounces, then divide into 7 feedings of 6 ounces each and feed at three hour intervals, skipping two night feedings.

These feedings should be kept on ice and submerged in warm water before feeding to the baby.

All babies fed on boiled milk mixtures should receive either orange or fresh tomato juice every morning to prevent scorbutus.

I might add that the above child is making an average gain of an ounce a day, which I consider normal.

Familiarity with this method of calculation, will enable you to take the materials, found in most any home, and make a food, parallel in value and at less cost, than commercial foods. In the event you desire to use commercial foods, you can at least do so intelligently and not be compelled to rely upon the directions contained upon the package.

You may discard the cream and skimmed milk mixtures and use other materials. These materials however, will insure greater accuracy until experience teaches you how to handle other foods. In short, Gentlemen, you will be emancipated from a servitude to laxity in methods, to which as general practitioners we are rapidly approaching, incident to the feeling of security, induced by the superlative and in some instances, spurious claims of the food vendors.

Book Reviews

Minor Surgery. By Frederick B. Christopher, M. D., Associate in Surgery at Northwestern University Medical School, Chicago. With a Foreword by Allen B. Kanavel, M. D., Professor of Surgery, Northwestern University Medical School. Octavo of 694 pages with 465 illustrations. Published by W. B. Saunders Company, Philadelphia. Price, $8.00 net.

In Dr. Kanavel's "Foreword" he says, "The author of the book presents in an adequate form the details of the diagnosis and treatment of truly minor surgery. His book is no mere compilation from previous texts; its source is his wide experience not only in this field but in general surgery, and from this experience he has chosen wisely and emphasized well."

Surgical and Medical Gynecologic Technic. By Thomas H. Cherry, M. D., F. A. C. S., Professor of Gynecology, New York Post-Graduate Medical School and Hospital; Director of Gynecology, Pan-American Hospital, New York City. With 558 Half-tone and Line Engravings, from Photographs and Pen and Ink Drawings by the Author. Published by F. A. Davis Company, Philadelphia. Price, $8.00 net.

The author presents in this book, which in all teaching is of great value, a single method of therapy, and gives illustrations to make this logical and comprehensive; in the surgical descriptions to present a sufficient number of illustrated steps, that a gap in sequence would not exist, so that one could readily follow the operation to its completion.

The book is divided into three sections, namely: Surgical Technic, Medical Technic and Gynecologic Conditions, that are frequently encountered in the clinic and office.

Clinical Obstetrics. By Paul T. Harper, Ph.B., M. D., Sc.D., F. A. C. S., Fellow of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, and of the New York Obstetrical Society. Illustrated with 84 Plates of Engravings (250 Figures) with Legends and Charts. Published by F. A. Davis Company, Philadelphia. Price, $8.00 net.

This work presents the natural phenomena of parturition, with detailed consideration of the abnormalities of pregnancy, labor, and the puerperium to which frequency of occurrence and the responsibilities involved give prominence. Simple diagrams with appropriate legends have been used to illustrate the text. The author presents this book with the firm conviction that clinical proficiency depends upon an analytical attitude toward all that is seen, and upon ability to isolate fundamentals and to make logical deductions therefrom.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 9, number 6. (Lahey Clinic Number—December, 1929), 188 pages with 51 illustrations, and complete Index to Volume 9. Per Clinic year (February, 1929 to December, 1929.) Paper, $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

The clinics in this number give five on Surgery, two on Anesthesia, two on Gastro-enterology, two on Medicine, one on Orthopedics, one on Urology and one on Ear, Nose and Throat.

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Editorial

SOME FACTS ABOUT SOME FADS

"Fussiness about health increases fear, the great enemy of mankind, and impairs the serenity which is the basis both of health and happiness." Such was the opening sentence of an address which Dr. Robert Hutchison of London, delivered before the 98th Annual Session of the British Medical Association at Winnipeg this last month, at which I had the privilege of being present.

This appears to me to be a timely and not inappropriate note of warning. Dissipation in any direction in the long run is always destructive, not alone in pursuit of enjoyment of the moment but quite as much if it be in the attempt to cure unemployment of body ills.

When one studies the vast health activities of our generation and realizes the immense amount of time, money and energy expended by the enormous numbers of individuals engaged in these activities, we sometimes wonder what is to be the sum total of the result therefrom. Certain it is that the first and immediate result is as Dr. Hutchison has said, to arouse in the minds of the public fear of impending chimerical disaster. This leads many unthinking people into all sorts of unwholesome fads and practices which more or less seriously undermine their physical health and render unstable their mental and moral balance.

It was said 2,000 years ago that "He that striveth for the mastery is temperate in all things," which is as basic a rule of conduct today as it was then. How sadly we of today have fallen away from this precept of right living.

A successful reign through fear alone is never long enduring, and usually is productive of evil practices which bring distress and suffering in their wake.

Faddists of every type are the curse of modern civilization, and though each in turn is but short lived, yet there is always another to take his place. It is a curious psychological fact that the failure of one fad after another to satisfy the needs of the gullible public, does not even sufficiently assault their intelligence to cure them of the fad habit; the age old belief in the pot of gold at the rainbow's end; the eternal longing for the short cut to sound health, happiness and riches.

There can be little doubt that the number of individuals who believe that this or that particular type of food or diet is necessary to good health, overshadows all other types of faddists put together. The food faddist who believes that constipation is the source of all mental, nervous and bodily ills, and that the cure of this super-devil is the eating of "roughage" is perhaps one who is guilty of the greatest sin, and leaves behind a trail of suffering which does not end, when his fancy being caught by some other fad, he turns away from over engorgement of indigestible and highly injurious food stuffs.

Constipation of itself, in an otherwise healthy individual, rarely if ever produces disease, and thus is more or less inconsequential. In such individuals, if ignored, the bowel habit will be spontaneously restored when the accumulation in the bowel reaches a point to stimulate the act of defication. The harm begins with the misdirected effort to force bowel evacuation by unsuitable means such as eating over stimulating and highly irritating indigestible foods, which as I have said are classed under the obnoxious term of roughage. These types of foods, if eaten in excessive amounts or constantly, ultimately set up areas of local irritation which sooner or later develop into low grade actual inflammation. Such areas of inflammation can, and very frequently do, lead to the development of more serious disease entities such as ulcer and may even so disturb the individual body cells in that location as to stimulate riotous growths developing into cancer.

Investigations carried on by McCance and Lawrence in England in 1929, as pointed out by Dr. Fishbein, showed that "in advocating whole meal bread for general use whether in time of need or in times of plenty, it should be remembered that not only men, but also women and children are concerned, and that all the experiments on which the arguments are based have been carried out on animals or adult males. Children are very intolerant of high cellulose diets, and, for some, brown bread is far too irritating, even if given with the idea of relieving constipation—in time of peace, of course, the grown up population, if they have choice, will never eat whole meal bread unless they like it, no matter how specious the advertisement, but they may force their children to eat it in the belief that they are doing them good. One should therefore be cautious in advising whole meal bread generally."

No single food contains all of the necessary qualities, one food supplying what another lacks, and all necessary ingredients being present in sufficient quantities in the ordinary well-balanced meal.

Frequently of late there have appeared articles not only by faddists, but by physicians as well in which we are advised to give no thought to what we eat or the manner of its preparation, being guided entirely by the cravings of the appetite. This appears to me an unsound doctrine, one which if followed literally may lead us into all manner of digestive troubles.

As an illustration of the truth of this one needs but to mention the decay of teeth of children who are permitted to eat candies and other sweets to excess. However, it is claimed in some quarters that it is not the consumption of excessive quantities of sugar which causes the caries of the teeth, but rather the lack of proper mouth hygeine. With this view I cannot agree. Rather it appears to me that the fault in these individuals lies in two directions. First, the excessive indulgence in sweets causes an engorgement of the portal circulation which through interference of the general circulation, prevents proper nutrition of the teeth; and secondly those who overindulge in sweets habitually eat an insufficient amount of other foods supplying the necessary constitutents for the growth and repair of the teeth.

Dr. Wm. Gerry Morgan of Washington, D. C., in reviewing this address refers to but one other faddist, from among the many that are rampant in the land, namely the exercise faddists. The man who makes a God of keeping "utterly fit" through exercise. Exercise of mind as well as body, is wholesome and necessary for preserving normal function, but in none of the activities of life is it so essential to adapt the method to the individual needs and capabilities as in this. Intemperance in bodily exertion, by going beyond the elastic limit is productive of great harm. The effects of this sort of intemperance often are not apparent at the moment, but develop weakness which seriously handicap the individual in later life. This effect is particularly noticed in causing weakness of the heart muscle. It is generally recognized that athletes are not long lived, and

frequently die suddenly. I have a feeling, says Dr. Morgan, that a large proportion of those who are reported in the daily papers as having died from acute indigestion fall into this class, hence the same or greater care should be given to the type and degree of bodily exercise as to other activities, particularly when the individual has reached the middle decade of life. It is unwise for one who has for fifty years been of sedentary habits suddenly to plunge into strenuous and active physical exercise.

The laity, ever eager to be cured of some distressing disorder such for instance as cancer, are quick to seize upon each new method which offers the relief which they seek, rarely pausing to learn whether such remedies have been proven of sound and practical value. Thus wide spread disappointment and actual suffering is experienced, and often great financial loss is entailed. The medical profession keenly regrets and attempts to prevent premature publicity of unproven results of scientific research. It is unnecessary to mention specific instances of such regrettable occurrences, but they are constantly being exploited and the public should be on guard against being lead along unsound paths, which end only in disappointment, sorrow and distress. It is only fair to the medical profession to say that these premature disclosures often come about without the intent or desire of the physician carrying on that particular piece of research.

It is our sacred duty to think long and scrutinize carefully, before we lend our moral and material support to the thousand and one agencies for physical and moral uplift.

Abstract

VALUE OF SALICYLATES IN PREVENTION OF RHEUMATIC MANIFESTATIONS

Sixty-seven children with potential heart disease and inactive rheumatic heart disease were given daily rations of 20 grains (1.3 Gm. of acetylsalicylic acid for a six months' period by Clifton B. Leech, Providence, R. I. (Journal A. M. A., Sept. 27, 1930). A control group consisted of seventy-nine children with similar potential and acquired rheumatic heart lesions. Fewer recurrences of chorea occurred in the experimental than in the control group. The control children did not do as well as the experimental in the matter of gain in body weight, improvement in the heart rate, general bodily comfort and actual physical capacity as judged by the functional classification based on ability to carry on normal activities without discomfort. There was no evidence of any effect of the drug on the slowly progressive development of mitral stenosis, nor can such be conceived. The number of rheumatic recurrences was too small and the time too short to allow accumulation of evidence in regard to any possible effect of the medicine in preventing endocarditis as a sequela of chorea or other rheumatic manifestation, but speculation is aroused as to the reason for the moderate preponderance of diminutions and disappearances of cardiac murmurs among the patients who were receiving salicylate rations. Improvement in bodily comfort seemed to play a part in allowing a more satisfactory gain in body weight. It was strikingly evident that normal gain in body weight was an accompaniment of general well being. Almost without exception the children with recurrences of chorea lost weight previous to the recurrence or gained only a slight amount. Frequently these children were subject to more or less troublesome joint and muscle pains and general discomfort. The acetylsalicylic acid seemed to be the factor which enable a number of the children to gain weight. Apparently a child who gains weight normally is unlikely to develop chorea. Thus, by increasing the physical comfort of the child and by making it easier for him to gain weight there seems to be an indirect effect of the drug which results in fewer attacks of chorea. This analysis seems to show that there is a definite advantage in giving daily rations of salicylates to children who represent actual or potention instances of rheumatic heart disease.

Personal and News Items

Dr. J. H. McLean of Caddo Gap was a recent visitor to Little Rock.

Dr. H. H. Niehuss of El Dorado visited in Little Rock last month.

Dr. D. K. McCurry of Alpena Pass has moved to Green Forrest.

Dr. C. A. Campbell of Mauldin has moved to Hatfield.

Dr. Morgan Smith, Little Rock, has returned from an extended motor trip to the far West, including Hollywood.

The Jefferson County, Kentucky, Medical Society which will be host to the Southern Medical Association during its annual meeting in Louisville, Ky., November 11th to 14th, 1930, desires cordially to invite the physicians of Arkansas to this event which will be the most outstanding medical convention ever assembled in Louisville.

"Doctor, when you are called upon to sign your name to a certificate or other paper dealing with the physical condition of a patient or the physical disability resulting from the illness of a patient, be sure that the paper you sign is in all respects accurate. Before you put your name to any paper, make sure that you could support the contents of that paper under the most searching cross-examination to which you might be subjected in a court of justice or elsewhere."

The Standards for Maternity Care which have been prepared by the Committee on Maternity Care of the Children's Welfare Federation in conjunction with a committee appointed by the New York Obstetrical Society, represent group thinking along lines of adequate care for maternity patients.

The report includes Prenatal Care, Adequate Delivery Service, After Care Qualifications and Responsibilities of Personnel; Space, Equipment and Facilities and Suggested Record Forms.

Copies of the Standards may be secured from the Children's Welfare Federation, 244 Madison Avenue, New York City.

TENTH COUNCILOR DISTRICT MEDICAL SOCIETY

The Tenth Councilor District Medical Society met in Fort Smith, September 16, 1930. Approximately ninety physicians attended the meeting.

The morning was devoted to clinical work at St. John's, St. Edward's Mercy and Sparks Memorial Hospitals. At the afternoon session, papers were read by Dr. Richard Weiss, St. Louis, Mo., and Drs. Harry Calvin Berger and Frederick B. Campbell, both of Kansas City.

The annual banquet was held at the Goldman Hotel with Dr. Thomas Douglass, Ozark, retiring president, as toastmaster. The guest speaker for the evening was Dr. W. C. Chaney, Memphis, Tenn.

Dr. W. H. Mock of Prairie Grove was elected President for the ensuing year.

EAT WHITE BREAD IF YOU LIKE IT

White bread is one of the most valuable of all foods, says *Hygeia* in answer to a question from a reader in the October issue.

It is true that whole wheat bread and graham bread, containing as they do, some of the bran as well as the germ of the wheat, have certain ingredients in the way of vitamins and roughage which are essential. If the bread were the sole article of diet it would be a serious loss not to have the bread these portions of the wheat, but the properties which they possess are obtained in abundance from milk, vegetables, fruit, eggs and other foods that are in the diet of most normal persons.

White bread is much more to the taste of most persons than are the coarser breads and as a part of a mixed diet there is no reason why it should be replaced with whole wheat or graham bread.

ANTIQUATED OFFICE OF CORONOR SHOULD GIVE WAY TO MODERN MEDICAL EXAMINER SYSTEM

The office of coroner requires a high degree of specialized training and ability in two widely different professions—medicine and law. Needless to say, few persons possess such training. The coroner may be a physician, a lawyer or an undertaker who is usually something of a politician, but usually he is just a politician, Dr. Oscar T. Schultz says in *Hygeia* in a discussion of what he terms the antiquated coroner system.

The function of the office is to ascertain facts that may aid in the apprehension or the conviction of a criminal or in establishing legal responsibility in cases of accidental death. Since in most States no professional or other qualifications whatever are required of the incumbent of the office it is apparent that the work of the office suffers in both its medical and legal aspects.

The present coroner system combines medical and legal duties that no single person could hope to perform adequately. Dr. Schultz believes therefore that there must be a complete separation of the legal and medical work at present carried on by the office. To accomplish this separation a new office must be created to do the medical work. Machinery for taking over the legal duties of the coroner already exists in every State.

Massachusetts took this step more than fifty years ago, and was soon followed by the other New England States. The legal duties were transferred to other agencies and the office of medical examiner was created. Not until 1917 did New York adopt the medical examiner system, but now the office of medical examiner of New York City is the outstanding example of the service such an office can render the public. One county in New Jersey has adopted the plan in recent years.

Book Reviews

Diabetes and Its Treatment. By Frederick M. Allen, M. D.

Care of the Mouth and Teeth. By Harvey J. Burkhart, D. D. S.

What Every One Should Know About Eyes. By F. Park Lewis, M. D. Published by Funk & Wagnalls Company, New York. Price thirty cents each.

This series of booklets are published under the auspices of the National Health Council, and the authors are well known to the medical profession. Three topics covered by these volumes have long needed non-technical and authoritative explanations prepared especially for the benefit of the general public, but of equal interest to the medical profession.

Hemorrhoids — The Injection Treatment and Pruritus Ani.—By Lawrence Goldbacher, M. D., Philadelphia. Illustrated with 31 half-tone and line engravings, some in colors. Published by F. A. Davis Company, Philadelphia. Price $3.50 net.

The author of this volume presents to the medical profession a maximum amount of practical information from a minimum amount of reading.

Part one of this book, consisting of five chapters, pertains to "General Considerations." Part Two: "External Hemorrhoids and Treatment;" Part Three: "Internal Hemorrhoids and the Injection Treatment;" and Part Four: "Pruritus Ani."

Obituary

JONES, ENOCH T.—Dr. E. T. Jones of Hampton died October 1, 1930. Aged 63.

He is survived by his wife; three sons, Jack, Bud and Monk Jones of Hampton; two daughters, Mrs. Nell Lyon of Hampton, and Mrs. Mary Primm of Pine Bluff.

LEE, WILLIAM RIDLEY—Dr. Wm. R. Lee of Mineral Springs, died July 13, 1930. Aged 49.

Dr. Lee was born in White County, Tenn., October 20, 1881, the son of the Rev. Thaddeus A. and Olivia Matheny Lee; he spent his early life in Tennessee, and received his literary education in Pleasant Hill Academy in that State.

On December 25, 1914, he married Miss Anna Laura Simms of Sparta, Tenn., after his marriage he located at Mineral Springs, Howard Co., Ark., where he practiced his profession until his death, which occurred at that place on the 13th day of July, 1930. He was buried at Sparta, Tenn., the 16th day of July, 1930.

Dr. Lee was a member of the Howard-Pike Medical Society and of Arkansas State Society. He was Secretary-Treasurer of the former for several years, serving in that capacity at the time of his death. He was held in high esteem by all who knew him, and especially by the members of his profession, who feel keenly his loss and we are grieved that we shall see his face nor hear his voice in our Society no more.

To his widow, we, the members of the Howard-Pike Medical Society, extend our deepest sympathy in her great loss, but let us be consoled in the thought that we shall meet Dr. Lee again on that great day when land and sea shall give up their dead.

Resolved, that a copy of these resolutions be spread on the minutes of the Howard-Pike Medical Society, a copy be given his widow and a copy be sent to the Journal of The Arkansas Medical Society for publication.

W. H. Toland,
E. V. Dildy,
J. L. Roberts,
Committee.

The Volume of the Blood and Plasma in Health and Disease.—By Leonard G. Rowntree, M. D., and George E. Brown, M. D., Division of Medicine, The Mayo Clinic and The Mayo Foundation, Rochester, Minnesota, with the Technical Assistance of Grace M. Roth. 12mo 219 pages, illustrated. Published by W. B. Saunders Company, Philadelphia. Cloth, $3.00 net.

The author of this splendid book shows the value of the study of the blood volume and plasma volume in clinical medicine. With values for blood volume the range for normal persons, as well as the mean, is important, since great fluctuations in volume are not compatible with health or with life. In disease, the number of erythrocytes may be reduced to less than 1,000,000 or even to 500,000 for each cubic millimeter of blood, as in pernicious anemia, or, on the other hand, their number may exceed 10,000,000 as in polycythemia vera. Yet, under either of these conditioned, the patient may live; and by proper measures he may be restored to comparative health.

Clinical Medicine for Nurses.—By Paul H. Ringer, A. B., M. D., Formerly Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; and on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Third Revised Edition. Published by F. A. Davis Company, Philadelphia. Price, $3.00 net.

This small volume is one of the best on the subject of "Clinical Medicine for Nurses" that has been our privilege to review. Dr. Ringer describes in concrete form a perfect detailed description of the most important points in the various diseases that nurses will be expected to observe and interpret.

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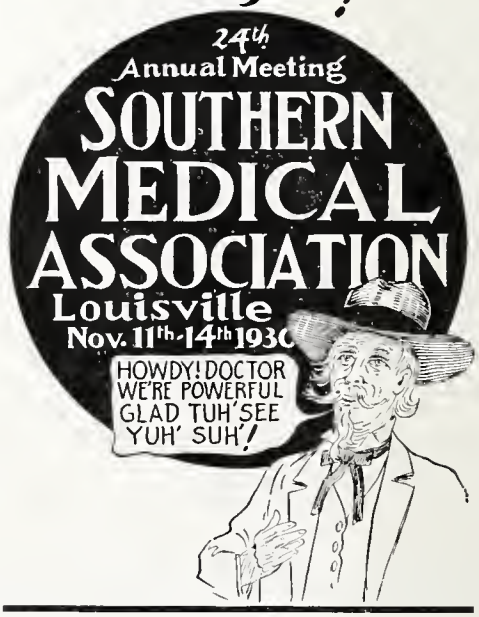

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Original Articles

THE MORE RECENT THERAPEUTIC MEASURES EMPLOYED IN THE TREATMENT OF TUBERCULOSIS*

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Oklahoma City, Okla.

Of all the factors involved in the successful treatment of tuberculosis, rest easily stands at the head. While the profession at large fully appreciates the value of general rest, only those who have had wide experience in the treatment of tuberculosis can fully understand the importance of local rest. The value of bed rest is partly due to the retarded respiratory rate and the decreased depth of respiration which results, thus bringing about a certain degree of local rest.

When the lung is inflamed, local rest is brought about by nature through partial fixation of the muscles which have to do with respiration, limiting the movements of the diaphragm and the thoracic wall, thus diminishing the function of the lung. Pleurisy with effusion brings additional local rest through the partial collapse of the lung resulting from the presence of the fluid. Spontaneous pneumothorax in advanced pulmonary tuberculosis, if not too overwhelming through infection of the pleura, may bring about marked improvement through local rest as a consequence of the associated lung collapse. Open pneumothorax arising through puncture wounds of the chest wall may be equally surprising in its beneficial effects.

Literally speaking, our solicitous "Mother Nature" has taught us the value of local rest in the treatment of pulmonary tuberculosis. Where is there a doctor who has not seen the shrunken, retracted, deformed hemothorax of the veteran antagonist of fibroid phthisis? All this, with the resulting displacement of the mediastinum and elevation of the diaphragm, is representative of the persistent and sustained effort on the part of nature to secure local rest for the diseased lung and is suggestive of the desirability of lending nature a hand in certain selected cases. Forlanini, in his little village of Pavia, must have been living close to nature when he conceived the immortal idea of artificial pneumothorax, Nature's faithful confederate in the production of local lung rest.

Artificial pneumothorax is indicated in all moderately advanced and far advanced cases of pulmonary tuberculosis not responding promptly to the accepted routine measures such as bed rest, good food and fresh air. Bilateral involvement does not constitute a contra-indication. If it is possible to determine that one lung is worse than the other unilateral pneumothorax is indicated. Even if this decision cannot be arrived at, pneumothorax may be instituted on one side with a view of simultaneous bilateral pneumothorax later. The beneficial results of artificial pneumothorax are universally recognized and need not be enumerated here.

Pleural adhesions may make it impossible to find the space or, in case space is found, they may render satisfactory collapse impossible. If the lung cannot be collapsed or if collapse is unsuccessful because of adhesions we must employ some other means of securing local rest. This may be accomplished by removing the phrenic nerve on the affected side in order to paralyze the corresponding half of the diaphragm. As a consequence of this

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

operation the diaphragm on the affected side is relatively fixed in a position one to two inches higher than it was before operation, thus securing a certain degree of collapse at the base and in addition, a partial cessation of function in all parts of the lung bringing about a certain degree of local rest. Under this method of treatment, extensive tuberculous lesions may gradually clear up and even cavities at the apex may heal.

In case artificial pneumothorax and phrenicotomy fail to accomplish desired results, we still have at our command a very effective method of securing collapse of the lung. This procedure is known as extrapleural para-vertebral thoracoplasty, or the surgical removal of sections of the ribs in order to collapse the chest wall. It is surprising how well this operation is borne by patients suffering from advanced tuberculosis. The results obtained in well chosen cases may be even more surprising. Large cavities may be closed; patients with two to four ounces of sputum daily may suddenly become sputum free, and tubercle bacilli which were innumerable in the sputum before operation may disappear in a few days. Patients who were otherwise hopeless, constituting a daily menace to other members of their families, may be converted into hopeful, useful members of society and returned to their homes and contact with their loved ones with relatively little danger.

The illustrations which follow were chosen with a view of showing the results of each of the therapeutic procedures mentioned above.

Figure 1. The first picture shows a large tuberculous cavity in the upper lobe of the right lung and some infiltration about the left hilum. In the second picture the right lung is almost completely collapsed by means of artificial pneumothorax; the cavity is virtually obliterated; the infiltration about the left hilum has cleared away and the sputum has become negative.

(Recent Progress in the Treatment of Pulmonary Tuberculosis; Southern Medical Journal 21:421, June, 1928.)

Figure 2. Shows a medium sized cavity in the upper lobe of the right lung. The second picture, one month after phrenicotomy, reveals a marked elevation of the diaphragm on the right and a striking change in the pathological condition suggestive of healing and closure of the cavity.

Figure 3. Advanced pulmonary tuberculosis predominating in the left lung with a very large cavity in the upper lobe. Pneumothorax was attempted with failure because of adhesive obliteration of the pleural space.

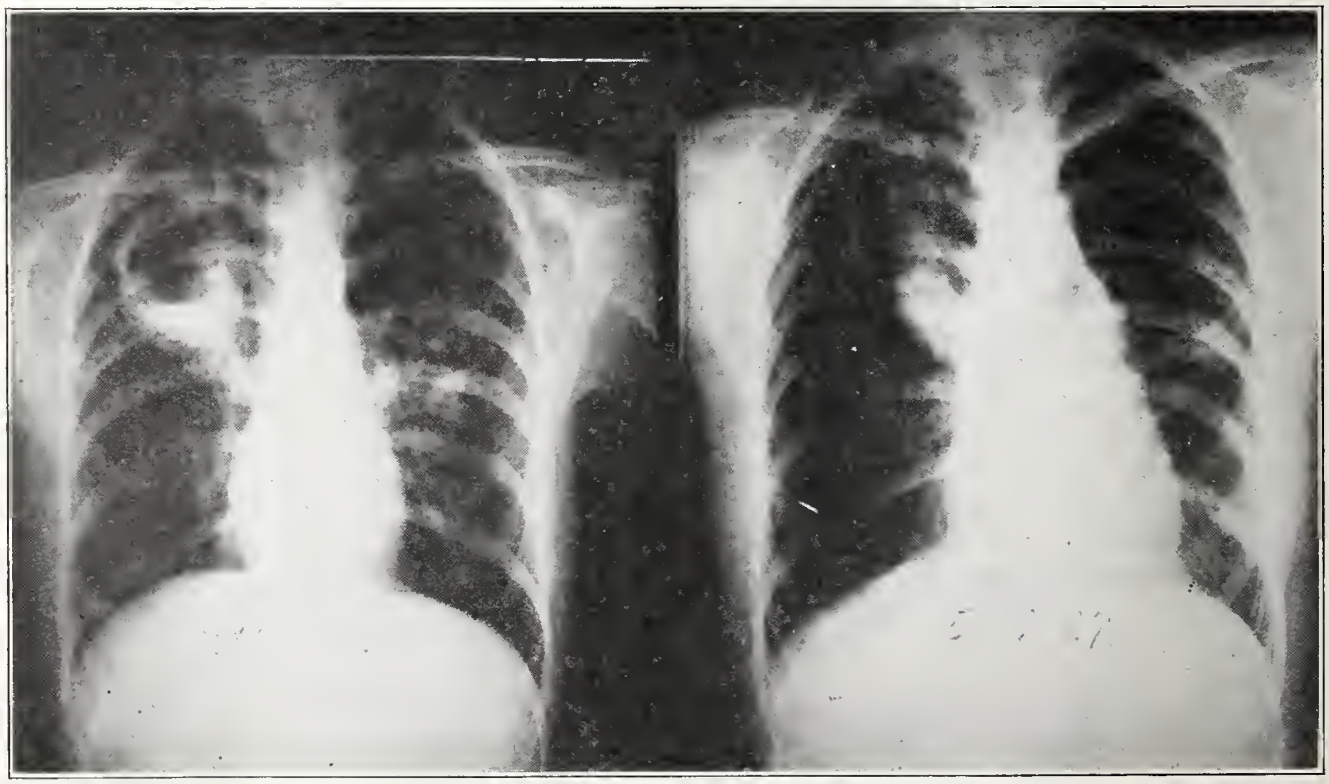

FIGURE 1. A case of advanced pulmonary tuberculosis treated by means of artificial pneumothorax. Note the large cavity in the upper right showing a fluid level.

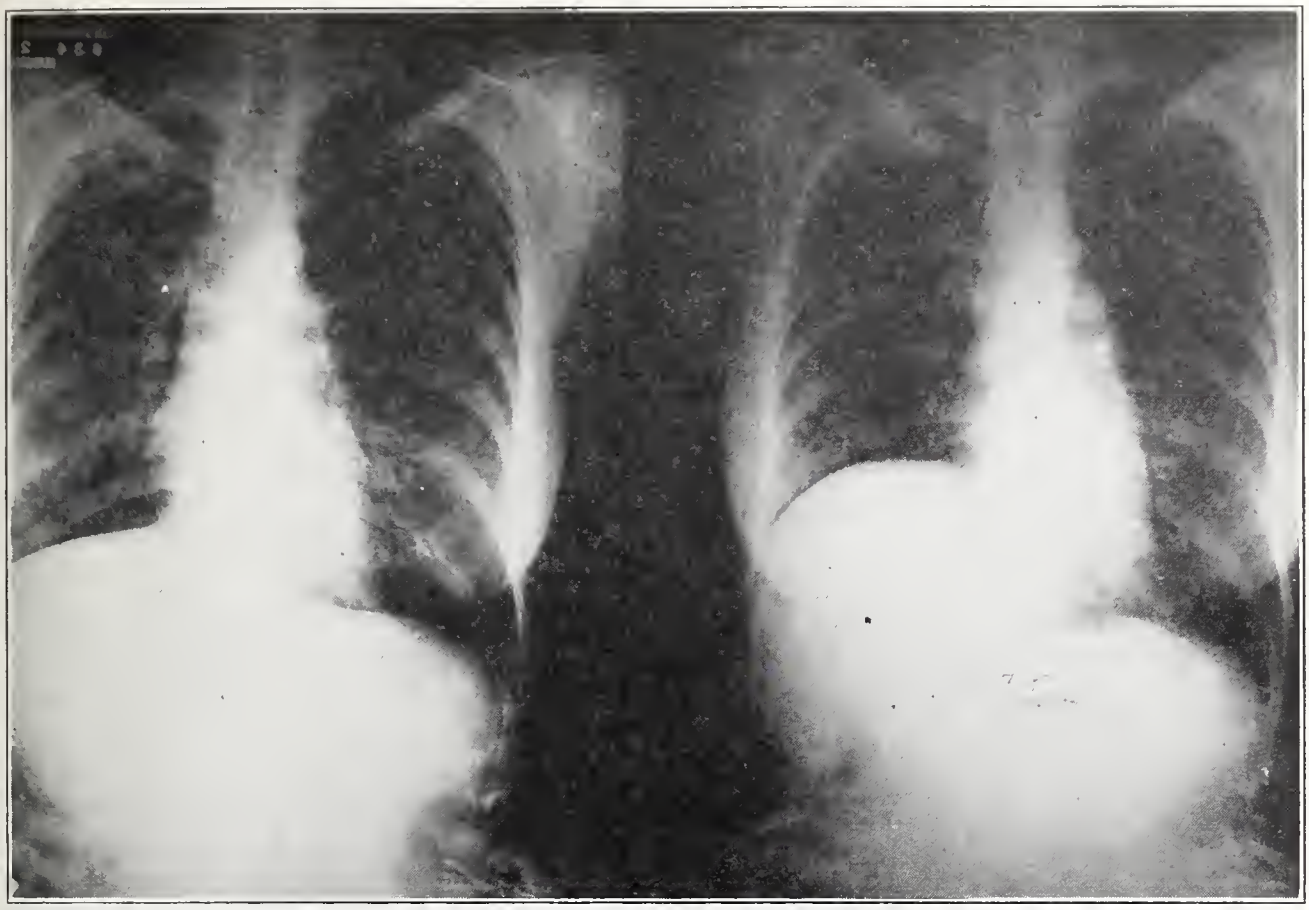

FIGURE 2. A case of moderately advanced pulmonary tuberculosis treated by taking the right phrenic nerve cavity in upper right just below the clavicle.

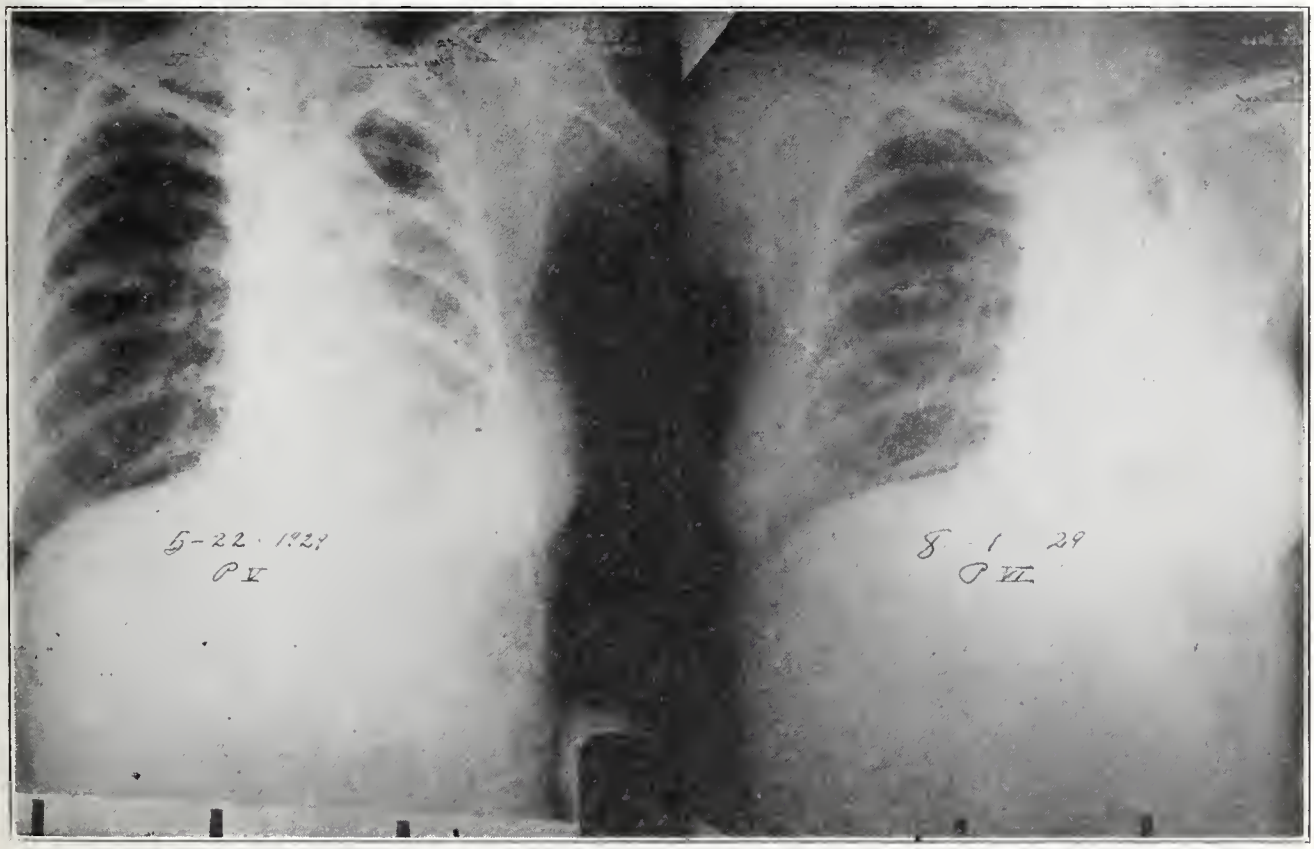

FIGURE 3. A case of advanced pulmonary tuberculosis treated by thoracoplasty after other methods had failed.

Phrenieotomy resulted in rather marked elinieal improvement, but the sputum remained positive and after several months there was no demonstrable reduetion in the size of the eavity. With little ehildren at home it was very important for this mother to become tuberele baeilli free before leaving the sanatorium. Seetions of seven ribs (1st to 7th, inelusive) were removed. The seeond picture reveals the marked collapse of the ehest wall with a eorresponding eollapse of that portion of the lung which eontained the eavity. The sputum has been negative sinee the first two weeks after operation. For the past eighteen months the patient has been at home with full supervision of her household affairs.

Figure 4. Showing the usual sear with slight degree of deformity resulting from an operation sueh as that reported under Figure 3.

(Recent Progress in the Treatment of Pulmonary Tuberculosis; Southern Medical Journal 21:421, June, 1928.)

CONCLUSIONS

1. Aeeumulated experience teaehes us that striking benefieial results may be achieved through the intelligent application of the above therapeutie measures.

2. These measures earry an unusual appeal beeause they are applicable to many cases otherwise necessarily eonsidered hopeless.

3. In the light of these faets every individual suffering from advanced progressive pulmonary tubereulosis has a right to demand a thorough diagnostie study with a view of determining whether or not there is a reasonable prospeet of being helped by one or more of these special proeedures.

4. Since the family physician is often handieapped by not having at his command all the diagnostie aids which should be employed in a careful appraisal of his patient's eondition, and sinee the special forms of treatment under eonsideration should be delegated to those having wide experience in the diagnosis and treatment of tubereulosis, and

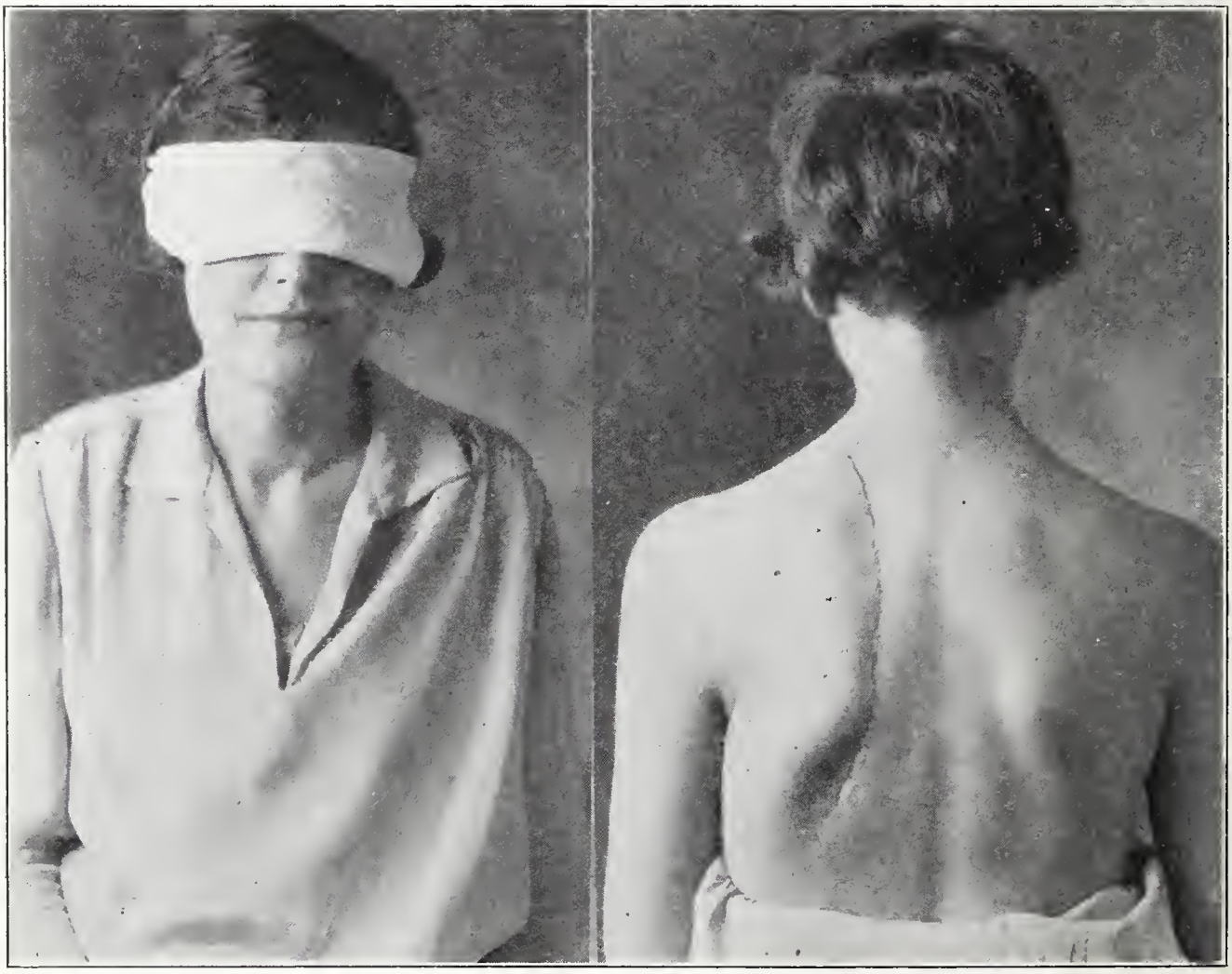

FIGURE 4. Showing scar after thoracoplasty. Note the slight amount of deformity.

should be undertaken, as a rule, only in sanatoria and hospitals where maximum professional efficiency and all necessary facilities are available, it is desirable to transport the patient to such an institution where a joint diagnostic study should be conducted by the phthisiotherapeutist and the family physician.

PROGRESS IN OPHTHALMOLOGY*

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Ophthalmology, one of the oldest of the specialties in medicine, still has many unsolved problems, and while it can boast of no great outstanding benefactions during recent years, comparable to the discovery of insulin for example, nevertheless it has made some very definite strides forward. It is the purpose of this paper to discuss some of these advances of possible interest to the general practitioner in medicine.

Ophthalmology has been quick to grasp the new ideas that have arisen in the various other branches of medicine and to appropriate unto itself those ideas and methods of value to the end that advances have been made in the etiology, pathology, diagnosis and treatment of many ocular lesions. In the field of etiology of particular noteworthy interest is the fact that many diseases and conditions, as iritis, cyclitis and choroiditis, have been taken out of that unscientific classification, idiopathic, and have been properly shown to be due to general or focal infections or intoxications.

An outstanding development in the field of etiology during the last decade is the apparent isolation of the etiologic agent of trachoma by the late Dr. Hideyo Noguchi. His experiments among the American Indians in 1926 resulted in the discovery of a new bacterium, Baterium Granulosis, which he believed to be the cause of this disease. This micro-organism he isolated from cases of human trachoma; produced a pure culture; and apparently reproduced the disease from which he again recovered, in pure culture, the organism. Thus all the postulates of Koch's law were fulfilled and we are encouraged to believe that a very important step has been made toward the eradication of a scourge that has caused so much suffering and blindness for hundreds of years.

Tuberculosis of the eye both from the etiologic, diagnostic and therapeutic standpoints has claimed much space in ophthalmic literature during recent years. Much has been added to our knowledge on this subject and apparently much more remains to be solved. Much of this knowledge is definite and conclusive but about other phases of ocular tubercular or questionable tubercular lesions much controversy exists. Clinical and laboratory studies have demonstrated conclusively that any tissue of the eye may become the seat of a tuberculous process. With very few exceptions, in the external eye, it is considered to be practically always secondary to a tuberculous focus elsewhere, and in most instances without manifest extra-ocular lesions. While the nodular forms and miliary tubercles, sometimes seen in the lids, conjunctiva, iris and choroid, offer little difficulty in diagnosis, the great majority of ocular tubercular lesions do not present a characteristic appearance and their diagnosis is attended with much difficulties and doubt. Tuberculin as a diagnostic aid is of much value though it does not now hold the high place it once held when it was considered a specific diagnostic aid in ocular involvement. Obviously local and general reactions in suspected tuberculosis of the eye are inconclusive since they may be caused by tuberculosis elsewhere, whereas a focal reaction in the eye after an injection of tuberculin is strong confirmatory evidence. The faith in focal reactions, however, as a specific has been shaken since they too have been produced in known tubercular lesions by other substances such as injections of milk and pollen injections. The response to tuberculin therapy is strong confirmatory evidence and from its value in treatment its specificity matters little except from a purely scientific standpoint. Tubercular lesions in general are characterized by their chronic nature and freedom from pain and many obscure inflammations in the eye are of tuberculous origin and one should always have tuberculosis in mind in dealing with such lesions without definitely known etiology. I have had several cases respond most gratifyingly to therapeutic injections of tuberculin after other treatments have failed. A full consideration of the subject of ocular tuberculosis lies not in the scope of this paper, but might well form the basis of a paper before this body.

Another interesting chapter has been written into ophthalmic literature with the devel-

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opment of our knowledge of tularemia. While it is to Dr. Edward Francis of the United States Public Health Service that we owe most regarding our present knowledge of this disease and while even before the time of his investigations and as early as 1911 McCoy and Chapin had isolated the bacterium tularense in cases from ground squirrels, it is to an American ophthalmologist that falls the honor of having diagnosed and had proved by laboratory methods the first case of tularemia in man (2). In 1913, Dr. D. T. Vail, Sr., of Cincinnati, had a patient with a severe and unusual conjunctivitis and as he recognized that it was something with which he was not familiar he referred it to a laboratory where Dr. William B. Wherry isolated this organism. One of the less common forms of tularemia is the oculo-glandular type. It is characterized by a sudden onset of a severe conjunctivitis with itching, swelling and edema of the lids, severe headache, chills, fever and vomiting. Very soon there is swelling of the pre-auricular and cervical glands on the infected side, and the formation of several small yellow discrete ulcers, usually on the conjunctiva of the lids. For the clinical course, diagnosis and treatment of this condition one is referred to the very excellent work of Dr. Edward Francis (3) and numerous other papers on the subject.

We cannot pass from a consideration of progress in etiology without stating that on three major conditions of the eye, cataract, glaucoma and sympathetic ophthalmia, no universally accepted theories of causation have been advanced. This trio of entities has long occupied the attention of some of the ablest investigators in the field of ophthalmology and still we have to answer to the inevitable question "What causes it?" when these diagnoses are arrived at that we do not know or are not certain. In sympathetic ophthalmia there are two surviving theories that are more or less satisfying. One is that it is in the nature of an anaphylactic reaction in a healthy eye after injury to a companion eye, and the other is that it is infectious in origin. Certain links in the chain of proof of either theory are still missing. Glaucoma is a term covering a number of conditions having only in common one symptom, that of increased tension, and varying so widely in their other clinical manifestations that it seems difficult to harmonize a causative theory to all of them. It seems probable that a number of causative factors are active and that eventually these varying conditions will be better classified.

Next we look to the progress in diagnosis. Some phases of this subject have already been discussed. In the field of refraction instruments of precision have been perfected making the exact measurement of refractive errors and especially muscular imbalances even more exact. The electric ophthalmoscope has made the study of the fundus oculi easy, and exact photography of the fundus is being fast developed and may have great value in adding a means of accurate records in the study of progressive conditions. Many laboratory tests of precision now available to us are of great value in the diagnosis of obscure eye conditions. The Wassermann reaction and its later substitutes will usually quickly show us where syphilis is at fault, and incidentally it has shown that many of the conditions which in former generations were quickly dismissed as of luetic origin are not such and have other backgrounds. During recent years there has been a revival of interest in, and an increased application of perimetry and a study of the fields of vision. A repeated study of the visial fields, for example, in simple glaucoma has been shown to be of as much value in diagnosis, prognosis and therapeutic indications as observations on the intra-ocular tension. It is only by constant vigilance as to the visual fields and the intra-ocular tension in those of glaucoma age that many cases of simple glaucoma can be detected before irreparable damage is done. The taking of tension formerly was dependent on the trained sense of touch and in borderline cases was only guesswork at best. Now we have at our disposal the tonometer, which, while not an instrument of absolute accuracy, will measure with only a small margin of error the tension of the eyeball. The use of this instrument undoubtedly marks a distinct advance as a diagnostic measure.

To the members of this society perhaps more interest is attached to what progress has been made in the treatment of ocular conditions than to any other phase of my subject. While no startling new drugs or operative or therapeutic procedures have been introduced, there have been refinements in old procedures, discarding of others, and more clear cut indications for other procedures have been worked out.

The treatment of trachoma should be of much interest to the members of this Society since Arkansas is considered one of the few foci of this disease in America. The backbone of the medical treatment of this condition still resolves itself into the stimulating applications, mainly the copper sulphate stick or silver nitrate, with which most of you are thoroughly familiar. On the surgical side the anatomical considerations thoroughly establish the soundness of surgical intervention in the sequellae of this condition, such as entropian and other cicatricial deformities of the lids, but as to surgical procedures actually attacking the pathology of the disease itself ophthalmologist are well divided. There are some ophthalmologist who do no surgery whatever in this disease, while others consider it largely a surgical condition. Of the surgical procedures practiced grattage and other similar measures, attacking the granulations directly seem to be growing less in favor, while removal of the tarsal plate is an operation now being heralded by some ophthalmic surgeons as giving excellent results. From a histopathological standpoint it would appear that this procedure is not well founded since trachoma is apparently a specific infection of the conjunctiva. It is my opinion that trachoma is a medical condition and surgery seldom indicated except in the sequellae.

The effects of the injection of foreign protein for the purpose of combating local infection can be studied in the eye to as great or greater advantage than in any other part of the body and out of this has developed some very useful therapy in eye diseases. Several forms of foreign protein may be used, but it is my opinion that injections of fresh cows milk which has been sterilized by boiling for four minutes gives better results than most others and posses the advantages of cheapness and easy procurability. When indicated in adults 6 to 8 cc. of milk should be injected intramuscularly on the first day, 10 cc. on the second day and after one day intervals 10 cc. should be given on the fourth and fifth, seventh and eight days and so on. In weak patients and children, begin with 2 to 5 cc. The danger of anaphylactic shock is very insignificant even after an interval of eight days.

Three very positive indications exist for milk injections—gonorrheal ophthalmia, threatened or existing intra-ocular infection, and certain forms of iritis. We also see results sometimes in other conditions such as retrobulbar neuritis, sympathetic ophthalmia and severe forms of acute choroid and corneal diseases. In gonorrheal ophthalmia the swelling and suppuration usually subside in a few days, often one or two days after injections and the gonococci frequently disappear in a few days. The usual local treatment should be given. In perforating injuries many eyes will be saved by these injections immediately given and milder forms of infection can be repressed by a single injection. In the acute plastic iritis of rheumatic origin the violent pain and other symptoms of inflammation usually react very favorably after a single injection and local treatment with atropine is made more effective.

Next we turn to a consideration of the treatment of glaucoma. The past decade has added little new in the treatment of this condition. This is still essentially a surgical disease though it is agreed that in simple glaucoma and in some cases of chronic inflammatory glaucoma attempt should be first made to control them by medical treatment. For this purpose reliance is chiefly placed in the miotics, pilocarpine and eserin. A notable attempt to combat this disease by medical treatment has been made by Carl Hamburger of Berlin. He developed a drug called levoglaucosan, derivative of the supra-renal glands said to be several hundred times more powerful than adrenalin, which when dropped into the eye causes a dilitation of the pupil and a decrease in the intra-ocular tension. This decrease in tension is due to a marked ischemia and is only transitory, and a few instances have been reported in which acute glaucomatous attacks have been precipitated as a secondary reaction following its use. This drug, while of little value in the treatment of glaucoma, has proved to be the most powerful mydriatic known and in acute iritis with adhesions will often succeed in dilating the pupil where atropine fails (4). A second substance called amin-glaucosan, a derivative of ergot, has also been developed by Hamburger. It is a powerful constrictor of the pupil, but reports indicate it is not more valuable in the control of glaucoma than the other miotics. Acute inflammatory glaucoma is always a surgical disease and broad iridectomy, done early, offers a large percentage of cures. In chronic and simple, non-inflammatory, glaucoma the percentage of cures or relief is less, but is increasing with early performance of

those types of operation which aim at a filtering scar, such as corneo-scleral trephine and others in which an attempt is made to incarcerate the iris in the incision wound so as to communicate sub-conjunctivally.

Sympathetic ophthalmia, or that condition in which a violent and destructive inflammation may set up in an eye after an injury and inflammation in the companion eye, still periodically brings new treatments and claims of cures, but nothing specific has appeared, and the percentage of recoveries in well pronounced cases is still small. Early diagnosis and energetic treatment however is materially decreasing the morbidity from this condition. To enumerate the numerous treatments which have been advocated for this condition would require more time than this paper permits, but notable among these is the administration of salicylates to saturation along with indicated local treatment of atropine, dionin and etc. The keynote to the control of this condition still lies in prophylaxis and it should be remembered that an inflamed blind eye following an injury is better out than in and that especially penetrating wounds of the ciliary region which communicate with the air are very prone to cause sympathetic ophthalmia.

We shall close this paper with a consideration of the treatment of cataract. This disease entity has withstood the attack of ages of learned men who have sought to conquer it by every conceivable remedy other than the knife, with little or no success. The only notable attempt during the last decade is that of E. A. Davis to attack it by bio-chemical means, using lens antigen injections. With this treatment he claimed arrest of the condition in 85 per cent of 250 cases, all types, and improvement in 50 per cent. Z. H. Ellis, in a small series of cases, failed to confirm Dr. Davis' promising results and it remains for further study by others of unbiased mind to properly evaluate this remedy. Meanwhile cataract still remains a surgical condition. The surgical treatment of cataract has always occupied much space in ophthalmic literature, with many minor modifications in operative procedures, but the operative measures all resolve themselves into modifications of two main types, either extraction by breaking the lens capsule or extraction of the cataract in an intact capsule. The latter operation admittedly gives better average results when successful and possesses the added advantage that it can be performed on immature cataracts, but also possesses the disadvantages of being technically much more difficult of execution and more susceptible to serious accident or complications during its performance. It is an operation for only a favored few whose great technical skill entitle them to face the hazards it offers, whereas the capsulotomy method is still the operation of choice of most ophthalmic surgeons and in all cases where every added factor of safety is desirable, such as where only one eye remains. The question arises: Is not every eye entitled to every factor of safety available?

In conclusion it must be noted that many topics of much interest and importance to ophthalmologist have not been mentioned, but it is hoped that many of the general physicians assembled here who do not have the time or inclination to follow a voluminous special literature may find assembled here, in compact form, information which may be of interest or useful to them.

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DISCUSSION

DR. K. W. COSGROVE, Little Rock: I want to compliment Dr. Calcote in giving in twenty minutes the progress in ophthalmology in the last ten years. It is quite a feat.

There is one thing I would like to stress and that is the responsibility of the ophthalmologist in the diagnosis of intercranial disease, with a patient whose symptoms are loss of vision or decrease of vision and headache. He comes to the ophthalmologist first, and without the visual fields which Dr. Calcote speaks of and the careful taking of them and the reading of them a proper diagnosis of intercranial disease cannot be made.

There is one condition which Dr. Calcote didn't mention in which considerable progress has been made; that is, in the preservation of the lachrymal sac. The old method of taking care of a chronic dacryocystitis was excision of the lachrymal sac with the resulting pouring out of tears and with very poor results. The newer method of Toti, Mosher and West, is to attempt to replace the normal physiology by taking away the nasal side of the lachrymal sac and to restore the normal physiological drainage of the lachrymal sac into the nose.

DR. H. MOULTON, Fort Smith: I was unfortunately detained so that I did not hear all of this paper, but I want to commend Dr. Calcote for bringing such a subject before an audience of this kind. So often we ophthalmologists think that our efforts in presenting a scientific paper before an audience of general practitioners is wasted, but not so with a paper of this kind. In thinking over the progress of ophthalmology in

recent years, it has occurred to me that, viewed from the standpoint of the patient, most significant progress has been made in the field of glaucoma. Since von Graefe's time, more than 75 years ago, ophthalmologists have felt rather secure in dealing with acute glaucoma. But not so with the chronic type. In the past few years, for the chronic type, the operation of sclerectomy has been done whereby permanent drainage of the eye which is under high tension can be established. And in those cases relief is given where the simple iridectomy so often fails to give. Of course, glaucoma is a serious disease, but in the late days while simple glaucoma of the non-inflammatory type was almost sure to gradually end in loss of sight, now with the sclerectomy, most usually the trephine operation, a large number of these cases can be saved.

The great point in having a paper of this kind presented is to attract the attention of the general practitioner to the importance of making an early diagnosis or having one made. When a patient begins to complain of failing eye-sight, a careful investigation should at once be made. So often a patient thinks that it is glasses that he needs; but many, many times with such patient it isn't glasses that he needs. It may be some irremediable trouble, but sometimes it is a remediable trouble and the general practitioner, if he is unable to make an accurate diagnosis, should select the proper course for the patient to pursue to get a correct diagnosis. My years of practice enables me to give that advice without feeling that you think I am trying to get you to send me business. But the conquest of ophthalmology has been so great that its advantages should be made use of by every doctor.

DR. R. H. T. MANN, Texarkana: If I might sum up in two or three words the drift of the progress in ophthalmology within the last 25 years, I think I can say it this way: The eye has become more the looking glass to the body within the last 25 years and the drift is going that way. In other words, so many diseases which we thought to be diseases of the eye itself 25 years ago we now know are only symptoms of real disease in the eye and the real disease exists outside of the eye. I think that any man who examines an eye alone in the treatment of iritis or so many other conditions, without looking the whole body over, certainly is missing the point. The real progress which has been made is in finding the cause of the iritis which we treated years ago and getting rid of that and curing the iritis. That's what I am trying to point out.

DR. GEO. B. FLETCHER, Hot Springs: The discussion, so far, of this paper has been by eye men. The paper was presented primarily for the general practitioner, of which I am one. I am very much interested in one particular thing, which was brought out in the course of the discussion, and that is increased intracranial pressure. I have no doubt with many of our cases of increased intracranial pressure the first symptom is papillitis or beginning choked disc or perhaps choking with beginning atrophy before we look into the eye ground. But if the nerve heads were looked at soon enough, we would arrive at a diagnosis much more definitely and rapidly. Perhaps soon enough to do some good.

I recall in the past few years one case that was operated upon. I believe Dr. Sachs reported it before this Society or some other society, of a most massive brain tumor in a silent area without any focal or Jacksonian symptoms, headache. or vomiting. The only evidence of the tumor at that stage was marked choking of the discs.

In the past two weeks I saw a gumma. We had a positive Wassermann. Later we got a positive spinal fluid, but didn't have it early enough in the diagnosis. The diagnosis really hinged on an eye ground examination which showed choked discs.

It isn't a big trick for any physician to have an ophthalmoscope and tell whether or not there is something wrong with the eye grounds, if he can't get to an ophthalmologist. Then it is easy enough if he thinks there is something wrong to get verification and more definite information. Possibly some symptoms in the eye ground will give us a lead on increased intracranial pressure. which we would not get otherwise until the case has progressed to a stage where actual damage to brain tissue has taken place.

DR. CALCOTE, Closing: I see many specialists here this morning and I am sure that together with many of the general practitioners you can think of many things I might have included in this paper or that you would like to discuss. But a paper of this kind covers so broad a field that I only attempted to give a panorama of the progress that has been made and many things I had to paint out of the picture. I want to thank the Ear, Eye, Nose and Throat men who discussed my paper, and especially, Dr. Fletcher, I was pleased to have an internist discuss it.

THE PRESENT KNOWLEDGE OF PELLAGRA*

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Pellagra has been one of the diseases which has created much discussion since it appeared in this country. Like all scientific problems which have never been solved, numerous theories have been advanced. Some of these theories have been thrown aside because no evidence could be found.

The dietetic theory of the etiology of pellagra has been in the foreground during the past few years, principally because of the work of the late Joseph Goldberger. Prior to the vitamin deficiency idea, he considered the relationship probably due to the specific quality of the amin-acid make up of protein supply (1). In this supposition he was wrong. Later Goldberger adopted the idea that pellagra was due to a lack of a vitamin. This vitamin is considered Vitamin G** now known to be a factor in the Vitamin B complex,

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which produces pellagra-like symptoms in the white rat. Goldberger (2) in 1916, published an article on a dermatitis which he developed in convicts on a deficient diet. The diet was given to eleven men between 24 and 50 years of age, consisting of patent wheat flour, corn meal (corn) grits, corn starch, white polished rice, standard granulated sugar, cane syrup, sweet potatoes, pork fat (fried out of salt pork), cabbage, collards, turnip greens and coffee. Skin lesions appeared first on the scrotum in six convicts and on the backs of the hands in two out of eleven convicts. The dermatitis as related to pellagra has been questioned. Another fault has been that it has never been repeated outside of a pellagrous community in a cold climate. Vitamin G is present in several of the articles used, but this might not have been present to any great extent. At any rate this work should be repeated so that all points under criticism can be proved, as there are too many discrepancies.

The production of pellagra-like symptoms in the white rat has been accomplished by Goldberger and Lillie (3), Chick and Roscoe (4), Hunt (5), Salmon, Hays and Guerrant (6), Sherman and Sandals (7) and Findlay (8). Thatcher, Sure and Walker (9), repeated the experiment with some modifications. The rash was produced by Sure in 20 animals on a diet composed of casein (purified) 20, salts (McCollum's 185) 4, agar-agar 2, butter fat 5, dextrin 2 with a daily supplement of six drops of cod liver oil per animal per day for the vitamin D. After a period of depletion 500 mgs. of rice polish were furnished to supply the antineuritic factor, vitamin B. This had been irradiated for 10 hours with a mercury quartz vapor lamp, according to the suggestion of Hogan and Hunter (10), in order to destroy the greater portion of vitamin G. The hair became roughened and thin and eschars occurred in regions of alopecia. The tendency was for these eschars to be bilateral. Congestion of the small intestines, especially the ileum, was frequent. Hemorrhages were occasionally present. The microscopical changes have some relationship to pellagra as hyperkeratosis, etc. There was a tendency for ulceration in the skin and in the stomach.

Goldberger (11) and others also attempted to relate black tongue in the dog to pellagra. Although this disease may be dog pellagra, yet the evidence has not been convincing. The pathological changes are not absolutely those present in pellagra. The cure of a disease does not establish its etiology. Wheeler (12) quotes that milk (including buttermilk), fresh beef, dried yeast (including its watery extract), wheat germ and canned salmon have been found by test both in the dog and in man to be dependable pellagra preventives. Likewise canned haddock, dried skim milk, tomatoes and dry cow peas have been found to possess pellagra-preventive qualities, but in small amounts. Salt pork, pork fat (lard), cane sugar and canned sweet potatoes have been found to offer no appreciable protection against the canine disease. This evidence is undoubtedly good, but the question arises whether or not we can be dealing with pellagra.

Several articles have appeared in the literature during the last few years concerning the relationship of alcohol and pellagra. One of the last articles was by Guthrie (13) in 1929. He reported on the pellagrins admitted to the Boston Psychopathic Hospital from 1922 to 1928. This study has in it the fallacy that the others have had. Only a few pellagrins were studied and conclusions could not be drawn on a small number. Those of us who have had experience with chronic alcoholism clinically or at autopsy know that hundreds of such cases occur without any symptoms of pellagra. Those of us who have seen many pellagrins know that these people as a rule are not alcoholic.

The work of Jobling and his coworkers (14) on the epidemiology of pellagra in Nashville is a most important contribution. One argument against the dietary theory was made that there was a decrease in pellagra without a corresponding improvement in diet. Since this article has been written we know that other outbreaks have occurred and a lack of vitamin G has not given us the entire explanation.

A recent editorial in the Journal of the American Association (15) has stated that the data on pellagra reported during the war was in accordance with the views of Goldberger. If such were true why should pellagra have been reported only amongst Turkish prisoners and Armenian refugees? The report by White (16) concerning the Armenian Refugees at Port Said in 1916-1917 gave the following daily diet for them:

Bread	750 gms.
Bourghoul†	5.6 gms.

Cheese	17.1 gms.
Lentils	11 gms.
Meat	8.6 gms.
Oil	5.3 gms.
Olives	14.3 gms.
Onions	2.5 gms.
Rice	8.6 gms.
Sugar	18.8 gms.
Vegetables	53.4 gms.
Beans	7.1 gms.

†Crushed wheat, boiled in water and afterward dried, the wheat still containing the cortex and the germ.

This diet contains vitamin G. Pellagra was reported to have been eradicated from this camp by means of an improvement in diet. The Jewish refugees did not have pellagra, who had a similar diet. However, it was stated that they consumed cotton seed oil which the Armenians refused and could add articles to their diet because they were earning money. It may be that the Jewish race had an inherited immunity for pellagra as they have had for other diseases.

In regard to the Turkish prisoners (17) there was also vitamin G in the diet, but it might not have been in the correct proportions. This study was made from the standpoint of protein food values. Careful searches for organisms were negative. German prisoners studied at that time did not develop pellagra.

Thatcher (18) reported an outbreak of pellagra in 1927 in Arkansas after the flood. There was a definite lack of food at that time. During the war the writer has seen in Europe hundreds of impoverished refugees and no symptoms of pellagra were present. This has been the experience of many other physicians at that time.

Recent research on "The Distribution of vitamin B2 in Certain Foods" by Aykroyd and Roscoe (19), gives us further information. They claim that the Vitamin G value of wheat and maize is poor; also dried peas. Dried ox liver, yeast and fresh whole milk are excellent sources of vitamin G. Dried meat and egg yolks have less vitamin G, but they are richer than the cereals. They believe that rat dermatitis, black-tongue in dogs and human pellagra are identical.

The work of Jobling and Arnold (20) has not been repeated. They isolated a fungus with photodynamic properties from the stools of pellagrins. This substance injected into white mice caused a rash which has some similarity to that of pellagra. Although these men do not claim that they have the etiological factor, yet they surely have evidence which cannot be overlooked.

Therefore, the etiology of pellagra has not been solved although the cure has been obtained by change of diet. A proper diet is valuable in other diseases and considerable research should be performed in order to obtain additional data in regard to the relationship of diet to disease. The infectious theory has also not been proved. We do know that the action of sun-light accentuates the symptomatology and this phase requires careful study. A definite statement as to the etiology cannot be made. It is a great advance in knowledge to know that there is a diet which will bring most of the pellagrins back to normal. Wheeler (13) states that "one-half ounce of dried yeast, 7 ounces of beef, 40 ounces of milk, 150 grams of wheat germ, 6 ounces of canned salmon or 1200 cc. of canned tomato juice, when added to the daily diet, will eliminate pellagra from an institution or from any other place." However, we must remember that the cure does not prove the etiology of the disease.

**The letter G has recently been adopted by a Committee on Nomenclature appointed by the American Society of Biological Chemists for the stable factor of Vitamin B complex. The British biochemists have provisionally adopted the term B2.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

MEETING OF THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

Held in Little Rock, October 7, 1930

DEWELL GANN, SR., Chairman

SIDNEY J. WOLFERMANN, Secretary

The meeting was opened by the Chairman, Dr. Dewell Gann, Sr.

Invocation by Dr. E. E. Barlow, President, Arkansas Medical Society.

Dr. Barlow presided during the entire session.

Present: Drs. E. E. Barlow, D. A. Rhinehart, H. B. Hardy, R. J. Calcote, L. T. Evans, H. T. Smith, L. L. Purifoy, Dewell Gann, Sr., M. E. McCaskill, W. H. Poynor, S. J. Wolfermann, M. C. John, Wm. R. Bathurst and Hon. Peter Deisch.

Dr. Barlow: Members of the Council and guests, the first order of business will be to introduce a delegation of physicians from Pine Bluff. I think you know all of them. At this time, we are going to hear what they have to say. Dr. Guerney, will you act as spokesman?

Dr. Gurney: The matter which we came up here to thrash out, or have you gentlemen thrash out, is relative to one of our members who took on himself the contract practice of the Eagles Lodge. The charges were preferred by our Board of Censors, and the matter was taken up in regular session. On the first count, after considering the vote, it was agreed that he should not be expelled. At a latter date, charges were preferred that he still continued in the practice and the censors tried him, found him guilty of this charge and brought the matter again to the attention of the Society, and at that time there was a unanimous vote that he be excluded from the County Medical Society. However, he was told that he could have a chance of an appeal before this body at this date which he said he would take. He was notified to that effect and we are here only to uphold the principles of Medical Ethics and of Organized Medicine. The things which provoked the Doctor, naturally caused him to say some very unkind things about the medical profession which we very much regret, but you can depend upon us to do our best to uphold the standard when it is brought to our attention.

Mr. Deisch: From the record which was placed in my hand it seems to me that the Jefferson County Medical Society was warranted in expelling this member. You observe that the constitution of the Society reads as follows:

"Section 5, Chapter 9. No physician * * * who is employed by * * * any association or organization which solicits members shall be eligible for membership."

It is not permissible to accept contract practice from organizations which solicits membership, and the fraternal organization from which the doctor accepted a contract solicits memberships.

The fact that the doctor was acquitted on June 3, would have nothing to do with his subsequent expulsion, for the reason that he continued to violate the rule as to contract practice after June 3. In other words, he was tried on June 3 for acts that he had committed to that time. He would have quite a talking point if he had committed only one offense, and was tried and acquitted, and then was subsequently convicted for the same act. But here the facts are different; it was the purpose of the Society after the first trial to give him an opportunity to mend his ways. When he failed to do so, and continued to violate the rules, the membership then decided to punish him. The vote was regularly taken in every respect.

Dr. Gurney: We want you to know there was no personal feeling into this. We felt that the Council should take it up and decide the question.

On motion, the Council unanimously approved the action taken by the Jefferson County Medical Society.

Dr. Barlow: Fellows, at this time we are going to introduce Dr. Thatcher, Professor of Pathology, Medical Department, University of Arkansas. He has a message for us.

Dr. Thatcher: I wish to call to your attention and recommend that a committee made up of lawyers and physicians plan a bill for the next Legislature regarding the pernicious coroner system in the United States.

"The importance to a community of the actual cause of death in any of its citizens is supreme, involving numerous interests, social and economic. Public health and safety may be involved, as well as criminal, civil, and compensation actions. It is a duty which we owe both to our dead and to the living to determine accurately whether death was due to disease, accident, suicide or of criminal origin. The establishment of the medical diagnosis may be the means of clearing the name of the deceased, or of vindicating an innocent person accused of crime; in cases of evident homicide or of criminal negligence it may furnish the basis for prosecution, thereby furthering the ends of justice and safeguarding the living from dangerous criminals, or from the recurrence of avoidable accidents."

"The rights of heirs and dependents of the deceased must also be recognized in their claims on accident policies, double indemnities, and other compensation. On the other hand, insurance companies are entitled to protection from unjust or fraudulent claimants." Chas. Norris, M. D.

"The U. S. of America derived its legal system from England. With the English laws we inherited the coroner system. This cumbersome procedure, requiring both medical and legal activities on the part of a coroner, obtained in Massachusetts up to the year 1877. At that time scandals which arose in the county of Suffolk, which includes the city of Boston, led to an investigation of the Coroner System by the Massachusetts Bar Association and the Massachusetts Medical Society. As a result of their collaboration the coroner system was abolished and the medical examiner system was established by the act of the Massachusetts Legislature."

"The medical examiner system places the medical responsibility as to what caused the death upon a medical examiner, and the legal responsibility, as to who caused the death, upon the courts. The medical examiner system has functioned now for fifty years in Massachusetts. The simplicity, efficiency, and sanity of the procedure have led to the establishment of similar systems in all of the New England States, excepting Connecticut, and in New York and New Jersey where it is Optional." Timothy Leary, M. D.

Dr. McCaskill: This is new to us, at least to me, and I should like to know the objectional features of the present Coroner System and some suggestion for its betterment, in other words, why is the Coroner System wrong?

Dr. Thatcher: It is wrong because it is handled by politicians.

Dr. McCaskill: How are you going to change that?

Dr. Thatcher: To do away with the coroner. That is a problem for the lawyer and promises that the cause of death goes down accurately and not a matter of guess.

Dr. McCaskill: Doctor, it is impossible to do that in this State in back counties where there is not a doctor who is competent to do post-mortem.

Dr. Thatcher: That could be centralized. In the city of New York, covering millions of people, Dr. Charles Norris has charge of it. He has, I believe, eight assistants in various parts of the city.

Dr. Barlow: We will have it discussed if you gentlemen so desire.

Discussed by several. On motion, the resolution was referred to Mr. Deisch, the attorney of the Society, with the Society's approval and with recommendation that it be referred to the Committee on Legislature of the State Bar Association.

Dr. Barlow: I want to hear at this time from Dr. Calcote, Chairman of the Program Committee for the Texarkana meeting:

Dr. Calcote: We would like to have our date of our meeting moved up a little next year. We feel sure that the men to whom we issue invitations would like to have it set at an earlier date. We are handicapped when we invite men to our meeting and not to be able to give them the exact date of our meeting. Several men accept our invitation and have to refuse later because of previous engagements. The meeting is usually held the first week in May. There are two reasons why we would like to have it held earlier. One is, it is so warm it is rather uncomfortable in our meeting; the other is, there are so many National medical meetings held along that time of the year, that for the last three years I have received that excuse almost universally so we would like to have the date for the meeting about the last week or the latter part of April.

Dr. Barlow: The Secretary informs me that the Miller County Medical Society has much to say about the date. They will select a date that will not conflict with any convention held in Texarkana. Another thing the Secretary suggests, is whether we should have moving picture demonstration at the next meeting. Better pictures are available now than there was last year.

Dr. Calcote: I hope it will be possible to have one or more moving films on our program.

Dr. Barlow: You should take into consideration that the majority of men do general work and it would be better to get a reel that would appeal to the country doctor as well as the urban doctor.

Dr. Calcote: We will try to have films that will be appreciated by all, and better acoustics than we had last time.

Dr. Barlow: Do you think it is possible to have too many invited guests? Do we overshadow the Arkansas men with our invited guests?

Dr. McCaskill: You can't have too many invited guests. It encourages our local men. We don't want our men to feel that there is not room. At the last meeting, one of the best papers, by one of our essayist, did not have sufficient time to present his subject properly. You all remember that most embarrassing situation.

Dr. Calcote: We plan on having four or five papers more than needed to take care of the absentees.

Dr. McCaskill: We always have a good program. We can very well leave it to the State Secretary as we have always done.

Dr. Hardy: Mr. Chairman, I was glad to hear you say you did not want to bring any new legislation before the General Assembly. We promised we would not do so many things after awhile if they would give us the Basic Science Bill. You have some very astute politicians in the persons of Doctors of Little Rock, present company accepted, and they know a lot about laws in the Legislature. I would be happy any way I can serve you. Just as Dr. Bathurst said, we have asked for considerable legislation, and they have been very kind to us. Possibly you will need some appropriation for our school of medicine, that is medical legislation.

They want the buildings and equipment of the State Hospital. They intend to rehabilitate the building as much as they can and offer to each county of Arkansas one or more rooms if they want to provide maintainance for one or more charity patients. The property already belongs to the State. It will merely help the medical school after that is done to have the property valued and go to the Rockefeller foundation or some other foundation and say, the State gives us $500,000, and ask the Rockefeller foundation to put up one-half million dollars for the buildings. What is the consensus of opinion around the table?

Dr. Bathurst: I think we should help the medical school all we can. I regret that we cannot help them financially.

Moved and seconded that we continue employment of an attorney as before, the fee to be decided by our president and secretary.

Dr. Barlow: The secretary instructed me to say all expenses of this meeting will be paid by the Medical Society.

Mr. Deisch: There are two other matters of much more importanee than that of the coroner bill. All the other States around, Nashville, St. Louis, Memphis, New Orleans have outstanding medical colleges, and it seems to me that we ought to be able to have approximately the same. Another thing I view of more importance than the Coroner Bill is contract practice. If I can impress anything on your minds, it is for every doctor in every county to suggest to their representatives and senators that you consider what the Society wants is important.

I just can't thank you enough for your confidence in me that you have shown today and on every occasion. I have never enjoyed any work as much as I have for you gentlemen. I enjoy my work very, very much, and I certainly want to thank you for the matter of again expressing your confidence in me.

Dr. Wolfermann presented correspondence from several physicians in Washington County, which will not be published at this time.

Dr. Gann: In order to not offend the doctor that questions the action of his County Society, I move that the matter under discussion be referred back to his County Society, and that they present it before the Council in the regular way.

The Motion was carried.

Dr. Wolfermann: A gentleman from Union County moved into Washington County, and applied for transfer to Washington County Medical Society and they refused to accept him. The County Society is the sole judge of its membership, and my personal belief was that they could turn him down. It is a courtesy to accept a member of another county but not compulsory.

Mr. Deisch: The first part of Section 5, on page 22, modifies the statement that each Society shall be the judge of the qualifications of its own members. It means to modify it so that a Society cannot and without just cause terminate, or deny membership, to a reputable and legally registered physician. There is a general rule that where there are two conflicting statements in a law, the last one shall prevail on the theory that the writer of it changed his mind. Instead of striking out the previous paragraph, the author meant what he wrote in the last paragraph. Section 8, on page 24, provides that "When a member in good standing in a component society moves to another county in this State, his name, on request, *shall* be transferred to the roster of the county society into whose jurisdiction he moves." This section, therefore, would prevail over the section previously quoted. If the rule quoted should be adopted, section 8 would be controlling, and when he goes from one Society to another, his name should be added on request, to the roster of the county society into whose jurisdiction he moves. I think he has a right to membership in the Washington County Society.

Dr. Bathurst: You don't have to be a graduate. The Constitution, however, does say that he must be a legally registered physician.

Dr. Wolfermann: I will present it that way when I go to the next meeting at Fayetteville.

No further business, the Council will adjourn to meet again at Texarkana at our next annual meeting.

Personal and News Items

Dr. E. W. Blackburn of Ozark was a recent visitor to Little Rock.

Dr. A. D. Gillum of Rover has moved to Ola, Arkansas.

Dr. S. N. Robertson of Sulphur Rock was a recent visitor to Little Rock.

MARRIAGE—Dr. C. S. Fulmer of Little Rock to Miss Ruby Glover of Little Rock, October 11, 1930.

Among the Arkansas surgeons who attended the Annual Meeting of the American College of Surgeons held in Philadelphia recently were: J. B. Jameson, Camden; H. Fay H. Jones, Robert M. Eubanks, Jos. F. Shuffield, and W. R. Richardson, Little Rock; G. E. Cannon, Hope; J. V. Ferguson, El Dorado.

The Medical Society of Delaware celebrated its one hundred and forty-first annual session October 14th and 15th, 1930.

Dr. C. A. Archer of DeQueen has returned from Kansas City where he attended the meeting of the Kansas City Southwest Clinical Society.

Dr. W. G. Hodges of Malvern attended the Post-Graduate International Medical Assembly at Minneapolis, and also visited the Mayo Clinc and the Hospitals in Chicago.

AUXILIARY NOTES

The Woman's Auxiliary of Garland County Medical Society met in the Porch Bay of the Kingsway Hotel for a luncheon October 20th.

A profusion of brightly colored garden flowers were used to decorate the tables.

Mrs. Geo. B. Fletcher, President, presided, and gave a very interesting talk, outlining the plans and programs of the Auxiliary for the coming year.

The guest speaker was Mrs. Chas. E. Oates. State President from Little Rock, who told briefly of the Medical Auxiliary of the State.

A motion carried to make layettes for the charity wards of the hospitals; furnish milk to undernourished pre-school children and to help tubercular children as their special work this year.

Among the guests for this occasion were head nurses of departments of the different hospitals.

Two lovely vocal numbers were given by Mrs. Clyde Beck, with Miss Leona Iattoni at the piano. Special guests were: Miss Inez Whitfield, Miss Ann Williamson, Miss O'Connor, Miss Wilson, Mrs. Agnes McNally, Mrs. O. J. McLaughlin, Mrs. J. McKeon, of St. Louis, Mo., Mrs. Harry Wooster of Lake Charles, La., Mrs. William White, Mrs. Henry T. Lee of New York, N. Y.

Covers were laid for sixty-five.

The following contributions have been made to the fund for milk for undernourished children, Doctor and Mrs. Henry T. Lee of New York, N. Y., $50.00; Mrs. Emma J. Falwell, Detroit, Michigan, $50.00; Mrs. Wm. Lyster, wife of the Commanding Officer of the Army and Navy Hospital, $10.00.

This Auxiliary also sponsored a Baby Health Show at the Garland County Fair.

The October meeting of the Woman's Auxiliary to the Pulaski County Medical Society was held at luncheon Wednesday at the Shrine Country Club followed by an afternoon bridge party. The luncheon tables were attractively decorated with autumn flowers and favors accentuating the Hallowe'en theme. Mrs. Anderson Watkins, auxiliary president, presided over a brief business session, during which a motion was carried to extend invitations to medical society auxiliaries in neighboring counties to meet with the Pulaski County group in a district meeting in November.

Business concluded, 12 tables were arranged for the game, at the conclusion of which a prize was awarded at each table. The next meeting will be held on November 19th, at the home of Mrs. Pat Murphey.

Mrs. J. S. Westerfield entertained the members of the Woman's Auxiliary of the Faulkner County Medical Society at her home on Locust Ave., Conway, October 16th. Mrs. H. C. Brooke, vice-president, presided in the absence of the president, Mrs. H. E. Cureton, who was ill.

Reports from committees were given and an endorsement of the recommendations as made by Mrs. Chas. E. Oates, State President.

Mesdames Marcus T. Smith, G. S. Brown and J. S. Westerfield were appointed a committee for birth registration in Faulkner County.

Mrs. Westerfield gave an interesting paper: "Preventative Measures against Typhoid Fever." Mrs. Smith gave an interesting report of the recent executive board meeting of the auxiliary held in Little Rock.

At the social hour Mrs. Westerfield served tea and cake. Mrs. J. W. DeJarnett will be hostess for the next meeting, November 20th.

Instead of having their regular meeting in September, the Faulkner County Auxiliary attended the lecture and showing of slides of the Cancer Clinic held during Cancer Prevention Week.

The first meeting of the Executive Board, Woman's Auxiliary to the Arkansas Medical Society, under the regime of Mrs. Charles E. Oates, was held October 9 at noon luncheon at the Woman's City Club, Little Rock. Present: Mrs. Chas. E. Oates of Little Rock, President; Mrs. Anderson Watkins, Mrs. J. B. Crawford, Mrs. J. C. Cunningham, Mrs. T. M. Fly and Mrs. William R. Bathurst, all of Little Rock; Mrs. W. V. Laws, Mrs. C. T.

Drennen and Mrs. Grayson Tarkington of Hot Springs; Mrs. E. L. Beck of Texarkana; Mrs. C. G. Hinkle of Batesville; Mrs. William R. Brooksher, Jr., of Fort Smith; Mrs. T. E. Benton of Lonoke; Mrs. Marcus Smith of Conway; Mrs. Dewell Gann, Sr., and Mrs. C. W. Jones of Benton.

Among matters of importance coming before the board at this time included reports of the year's work planned in Garland, Saline, Faulkner, Pulaski, Sebastian, Miller, Independence and Prairie Counties. Mrs. Oates reported the personnel of the auxiliary's advisory committee selected by Dr. E. E. Barlow, President, Arkansas Medical Society as follows: Dr. William R. Bathurst of Little Rock, Dr. D. W. Goldstein of Fort Smith, and Dr. T. F. Kitrell of Texarkana. She also reported the recent organization of a medical auxiliary which combines Conway, Yell and Pope Counties.

Two loans have been made to medical students during the past year, according to a report of Mrs. C. W. Jones of Benton, Chairman of the Student Loan Fund. Other reports included one by Mrs. William R. Bathurst, concerning the meeting of the American Medical Association in Detroit last May, and another by Mrs. T. M. Fly, who told of the death this summer of Mrs. R. Q. Patterson and Mrs. D. R. Hardeman, former Little Rock members.

The following recommendations were made by Mrs. Oates:

(1) That each County Auxiliary have an advisory committee in their County Medical Society.

(2) That each have a program of Public Health work as far as possible in her county.

(3) That each Auxiliary see that Hygeia is placed in every school library, County Superintendent's office and the library of the Girl and Boy Scouts.

(4) That their year begin, or election of officers be held in the spring so that county, State and national year may conform.

(5) That monthly reports be sent to the State Publicity Secretary from each County Auxiliary.

(6) That the County Auxiliaries take up the work of birth registration.

THE FIRST COUNCILOR DISTRICT AND NORTHEAST ARKANSAS MEDICAL SOCIETY

(Reported by W. M. Majors, Sec'y)

The First Councilor District and Northeast Arkansas Medical Society held its fall meeting at Tyronza, October 15, where the Society was entertained by the Craighead-Poinsett County Medical Society.

Approximately one hundred and fifty doctors and their wives, together with many other guests, were in attendance from the following towns:

Black Rock, Blytheville, Brookland, Crawfordsville, Clarkdale, Harrisburg, Jonesboro, Lake City, Luxora, Marion, Marmaduke, Marked Tree, Osceola, Paragould, Poughkeepsie, Swifton, Tyronza, Turrell, Trumann, Walnut Ridge, Weiner, and Memphis, Tenn.

The meeting was called to order and presided over by the President, Dr. A. G. Henderson, Jonesboro.

The program was as follows:

Morning Session

Invocation—Rev. W. E. Hall, Tyronza.

Address of Welcome on behalf of Tyronza and the Craighead-Poinsett County Medical Society—W. H. Moreland, Tyronza.

Response to Address of Welcome—F. D. Smith, Blytheville.

Minutes of previous meeting were read and approved.

"Hysteria"—Thad Cothern, Jonesboro. Discussed by L. H. McDaniel, Tyronza, C. M. Harwell, Osceola, G. A. Warren, Black Rock and W. M. Majors, Paragould.

"Typhoid Fever"—G. A. Warren, Black Rock. Discussed by A. M. Washburn, Blytheville, Ed Clay Mitchell, Memphis and and others.

"X-Ray as a Benefit to the General Practitioner"—W. R. Bethea, Memphis. Discussed by Ed Clay Mitchel, Memphis, A. G. Henderson, Jonesboro and W. S. Lawrence, Memphis.

Luncheon was served in the basement of the First Baptist Church, at which time Dr. A. F. Cooper, Memphis, made a talk in the interest of the 1931 Session of the Tri-States Medical Association.

AFTERNOON SESSION

President's Address—A. G. Henderson, Jonesboro.

"Diagnosis of Intestinal Obstruction"—J. L. McGehee, Memphis. Discussed by R. L. Sanders, E. M. Holder, W. R. Bethea, Robert Mann, R. T. Nowland, J. A. Crisler, Jr., and W. S. Lawrence, all of Memphis.

"Methods of Treatment of Arterial Hypertension"—J. H. Lamb, Paragould. Discussed by C. H. Sanford, Memphis.

"The Early Diagnosis of Pulmonary Tuberculosis"—A. F. Cooper, Memphis. Discussed by Ed Thompson, Memphis, L. C. McVay, Marion, C. D. Blessengame, Memphis and W. A. Rech, Memphis.

"Normal Obstetrics"—H. R. McCarroll, Walnut Ridge. Discussed by C. D. Blessengame, Memphis, L. C. McVay, Marion, E. L. Kennedy, Marmaduke, C. M. Harwell, Osceola, and P. L. Tipton, Blytheville.

"Spastic Paralysis"—John T. Hunn, Harrisburg. Discussed by R. C. Bunting and J. J. Speed, Memphis.

Councilors Address—W. W. Verser, Harrisburg.

Dr. J. H. Lamb, Paragould, was elected President and Dr. T. F. Hudson, Luxora, was elected Vice-President.

Paragould was selected for place of meeting for Spring, 1931 Session.

Obituary

IN MEMORIAM

Dr. Enoch Taylor Jones of Hampton died October 1, 1930. He was born in Memphis, Tennessee, June, 1867, the son of Dr. W. B. and Mary Jones. When just a lad he moved to Calhoun County, Arkansas. He graduated from the Memphis Hospital Medical College and had practiced medicine at Hampton from 1893 until his death. By his ability and likable disposition he built up a large practice. He was held in highest esteem by his professional associates, and had held every office of his County Society, being its president at the time of his death. He had been a member of the State Society since 1902. He was appointed health officer for his county immediately after the health law was enacted.

In 1904, he was married to Miss Nellie Cogan. To this union, five children were born, three sons and two daughters.

Dr. T. E. Rhine, Thornton.

County Societies

ARKANSAS COUNTY

(Reported by E. B. SWINDLER, Sec'y)

The Arkansas County Medical Society met October 14, at the Sparks Hotel, DeWitt.

Present: Whitehead, Riley, Drennen, John, Dickens, Park, Lowe, Rascoe, and Swindler. Dr. R. C. Allen was a visitor.

The following program was presented:

"Icterus Neonaturum," by M. C. John.

"Infantile Paralysis," by R. H. Whitehead.

"Diphtheria," by C. W. Rascoe.

The next meeting will be held in Stuttgart, Tuesday, November 11.

CONWAY COUNTY

(Reported by A. L. GOATCHER, Sec'y)

The regular monthly meeting of the Conway County Medical Society was held in Morrilton, October 16, in the office of the County Health Unit.

Dr. W. H. Bruce, Director of the Unit, had provided two clinical cases, which brought out helpful suggestions.

Dr. S. F. Hoge of Little Rock was present and made a most interesting talk on the use of oxygen.

HOT SPRINGS COUNTY

(Reported by W. G. HODGES, Sec'y)

The Hot Springs County Medical Society met in the Hot Springs County General Hospital at Malvern, September 18. The following members were present: E. T. Bramlitt, W. F. Barrier, C. Prickett, J. M. Williams, E. H. Howze, J. W. Pharr, E. H. McCray and W. G. Hodges. The Society had as their guest Drs. George B. Fletcher, Grayson E. Tarkington and H. Hansell Preston of Hot Springs.

Dr. Fletcher gave a talk on some of the outstanding symptoms of mental diseases, illustrating differential points in diagnosis. Dr. Tarkington then showed some interesting X-ray plates, illustrating the value of encephalography in certain types of obscure pathology of the brain, at the same time explaining the technique of injecting air to better visualize certain land marks of the brain.

INDEPENDENCE COUNTY

(Reported by FRANK, A. GRAY, Sec'y)

The Independence County Medical Society met in Batesville, October 13, with the following members present:

E. M. Huskey, Cave City; O. S. Wood, Salem; D. V. McAdams, Cord; T. J. Wood and E. M. Gray, Evening Shade; T. N. Rodman, L. T. Evans, C. A. Churchill, J. M. Hooper, O. J. T. Johnston, C. G. Hinkle, R. C. Door, and F. A. Gray, Batesville.

The following program was rendered:

"Cardiac Arythmias," by T. N. Rodman.

"Carcinoma of the Gall Bladder," by J. M. Hooper.

"Tumor of the Mediastinum," by O. S. Wood.

"Diagnosis and Treatment of Carcinoma of the Uterine Cervix," by F. A. Gray.

All papers were freely discussed.

The Second Councilor District meeting will be held December 8. This meeting will take the place of the next County meeting. Dr. L. T. Evans is President of the District Society and Dr. Sam Allbright is Secretary.

MISSISSIPPI COUNTY

(Reported by F. D. SMITH, Sec'y)

The Mississippi County Medical Society met in Wilson, Tuesday, October 14, 1930, with the following present: P. L. Tipton, A. M. Washburn, C. T. Morris, M. O. Usrey and F. D. Smith, Blytheville; W. M. Owen, Armorel; T. F. Hudson, Luxora; C. M. Harwell, Osceola; R. L. Johnson, Bassett; J. H. Campbell, Joiner; O. Barksdale, N. B. Ellis and E. R. Barrett, Wilson; H. F. Crawford, Memphis, Tenn; Lyle Motley, R. C. Bunting, W. Likely Simpson and J. L. McGehee of Memphis, Tenn. were visitors.

The scientific program presented was as follows:

"Amebiasis," by H. F. Crawford.

"Indigestion," by Lyle Motley.

"Acriflavin in the Treatment of Chancroids," by E. R. Barrett.

After the meeting adjourned, lunch was served by the physicians of Wilson.

Book Reviews

Practical Psychology and Psychiatry.—For Use in Training Schools for Attendants and Nurses and in Medical Classes, and as Ready Reference for the Practitioner. By C. B. Burr, M. D., Late Medical Director, Oak Grove Hospital (Flint, Mich.), for Mental and Nervous Diseases. Sixth Edition, Revised and Enlarged, with Illustrations. Published by F. A. Davis Company, Philadelphia. Price, $2.75, net.

This book covers the following main headings: Psychology; Symbolism in Sanity and Insanity; Insanity; Management of Cases of Insanity, and the Prevention of Insanity. This editor presents certain new methods in treatment, and the chapter on Prevention of Insanity has been greatly improved.

Interns Handbook.—A Guide to Rational Drug Therapy, Clinical Procedures and Diets. By Members of the Faculty of the College of Medicine, Syracuse University. Under the Direction of M. S. Dooley, A. B., M. D., Chairman, Publicity Committee. Published by J. B. Lippincott Co.

Part one in this book gives: Prescription Rules; Pharmacy Rules; Simplified Metric Prescribing; Drugs; Vehicles; Bases; Flavors and Colors. Also an outline of the emergency treatment of drug poisoning.

Part two includes the standard clinical procedures—medical, surgical and special; dietaries; the technic of routine tests; the technic of safeguarding laboratory specimens.

Bacteriology for Nurses.—By Harry W. Carey, A. B. M. D., Assistant Bacteriologist, Bender Hygienic Laboratory, Albany, N. Y. (1901-1903) Pathologist to the Samaritan Hospital, Troy, N. Y. Third Revised and Enlarged Edition. Illustrated with forty-three engravings and one colored plate. Published by F. A. Davis Company, Philadelphia. Price $2.25, net.

This edition has been entirely rewritten and enlarged. It serves not only as a text, but as a reference as well. Following each chapter is a list of questions in review.

Getting Well and Staying Well.—A Book for Tuberculous Patients, Public Health Nurses, and Doctors. By John Potts, M. D., Fort Worth, Texas. Introduction by J. B. McKnight, M. D., Superintendent and Medical Director, Texas State Tuberculosis Sanatorium. Second Edition. Published by The C. V. Mosby Company, St. Louis. Price $2.00.

The author presents this volume in the hope that it will aid patients, nurses, doctors in learning where their personal responsibility begins and where it ends. Also that it will furnish answers to many questions that come to the minds of patients, their families, and family physicians.

ROENTGENOLOGY OF UPPER RESPIRATORY TRACT

Henry K. Pancoast, Philadelphia (Journal A. M. A., Nov. 1, 1930), says that the portion of the upper respiratory tract in the neck has been a neglected field for roentgenologic study. He says that practically all pathologic conditions of the larynx and neuromuscular disturbances present some recognizable phenomena or abnormal appearances, many of which are characteristic. The examination must be both fluroscopic, for studying moving parts, and roentgenographic, for purposes of record and finer details. The study of phonation and the swallowing act is essential in all cases. He describes both of these functions.

DIAGNOSIS OF LARYNGEAL DISEASE

Chevalier Lawrence Jackson, Philadelphia (Journal A. M. A., Nov. 1, 1930), says that hoarseness, the most common symptom of laryngeal disease, always, calls for careful diagnostic study. Too often patients with this complaint are sent away with a casual diagnosis of "laryngitis." As a result, the patient with early and easily operable cancer or incipient tuberculosis, is allowed to go on for months without an accurate diagnosis and appropriate treatment. He reports on a series of cases which demonstrates the value of fluoroscope and roentgenographic study of the neck in the diagnosis of laryngeal lesions. The roentgenologist can now detect inflammatory and neoplastic processes in their incipience, when they are causing only the mildest symptoms.

NONMALIGNANT NODULES OF BREAST THE RESULT OF PROLAPSE

Lilian K. P. Farrar, New York (Journal A. M. A., Nov. 1, 1930), finds that prolapse of the virginal atrophic breast is occurring with alarming frequency in this country owing to the present fashion in dress. There is danger of permanent prolapse of such a breast and perhaps danger of cancer developing from prolonged stasis of breast tissue. Plastic operation for prolapsed atrophic breasts is an unnecessary mutilation of a young girl. Plastic operations on prolapsed atrophic breasts will deprive nursing mothers of breast tissue and milk ducts with too little tissue left for nursing and possibly "caked" breasts and abscesses of the breasts as a result. The change of dress with proper uplifting support of the breast will cure the condition if treatment is begun early.

ROENTGEN EXAMINATION OF PARANASAL SINUSES AND MASTOIDS

During the past seven years in his hospital service alone Amedee Granger, New Orleans (Journal A. M. A., Nov. 1, 1930), has made more than 5,000 roentgen examinations of the paranasal sinuses and he is convinced that a careful study of the roentgenograms made in the two positions he advocates will furnish all the information necessary for a diagnosis. He admits readily that the injection of iodized oil in the sinuses will often bring out more clearly and with greater detail pathologic changes present in the sinuses, but he is also certain that in the vast majority of cases these changes could have been seen by more experienced or careful observers in roentgenograms made without the injection of the iodized oils.

INDICATIONS FOR AND RESULTS OF CONSERVATIVE OPERATIONS OF KIDNEYS

Waltman Walters, Rochester, Minn. (Journal A. M. A., Nov. 1, 1930), reports a sufficient number of successful cases of conservative renal pelvic resection for hydronephrosis and heminephrectomy to emphasize the value of conservative operation in such cases rather than nephrectomy provided a sufficient amount of normal renal parenchyma remains. The beneficial effects of simple ligation and division of anomalous renal vessels which obstruct the uretero-pelvic juncture and produce hydronephrosis are emphasized. Renal or ureteral calculi will often produce enough disturbance of renal function to lead to an erroneous assumption that the kidney may be partially or even totally destroyed, but that such is not the case is evidenced by satisfactory function of the kidney after the removal of as many as eleven stones, or of a staghorn stone filling the pelvis and calices. Seriously injured kidneys, containing calculi, may show remarkable restoration of function following the conservative operation of pelviolithotomy.

INCIDENCE OF RECURRENT RESPIRATORY INFECTIONS IN CHILDHOOD

Of 582 children with respiratory infections observed by C. C. McLean, Birmingham, Ala. (Journal A. M. A., Nov. 1, 1930), from Sept. 1, 1928, to June 1, 1929, 241, or 41.7 per cent had one or more recurrent infections. Weather conditions apparently had little or no effect on the number of primary or recurrent respiratory infections. The recurrent infections were apparently as common in the patient who had had tonsillectomy and adenoidectomy as those who had not had the operation. The monthly percentage increase of the total number of primary cases showed a marked variation, while the monthly percentage of recurrences in primary cases showed little. Contact with individuals who had the disease seemed to have a marked influence on the number of primary infections. Apparently, contact with individuals with the disease had little or no effect on the number of recurrent infections. He concludes that the consistency in the periodic recurrent incidence in respiratory infections, as observed over an eight year period, is more than suggestive of a periodic recurrent disease.

DRINKER RESPIRATOR

Philip Drinker, Boston; Thomas J. Shaughnessy, New York, and Douglas P. Murphy, Philadelphia (Journal A. M. A., Oct. 25, 1930), have found by experience that the respirator is effective in cases of acute anterior poliomyelitis, gas poisoning (carbon monoxide), alcoholic coma, drug poisoning (morphine, heroin, barbital) and drowning. There was one postoperative respiratory failure and one failure in asphyxiation of the new-born. In the latter case the child was kept alive, but died later of complications. There is a field for the device in the treatment of new-born babies in whom respiration is not initiated by the usual means. Contraindications for the use of the respirator are simply those of observing the patient's reaction to the respirator. If the patient is not suffering from respiratory difficulty or is not cyanosed, there is generally no point in using the respirator. If the patient does not respond to the treatment and does not spontaneously breathe in synchronism with the machine, the artificial respiration may actually interfere with his voluntary breathing and certainly does no good. Even in the case of conscious patients who are frightened and apprehensive, but badly cyanosed, we have experienced no great difficulty in putting them into the respirator. A patient can be transferred from a bed or stretcher to the respirator very easily in less than one minute by inexperienced persons. In many instances morphine has been given to patients who are already in respiratory difficulty, but are apprehensive of the machine and are restless. This treatment has proved effective, especially in poliomyelitis, but obviously it is to be used only when the respirator is immediately available or when the patient has already been placed in it. In the treatment of infants who do not respond to the customary respiratory stimuli at birth, the respirator seems particularly applicable. In such instances the machine must be near at hand, preferably in the delivery room or a room adjoining. A sufficient number of patients have been treated to indicate that, for the new-born, the respirator has a very useful field.

GASTRIC ACHYLIA

M. H. Streicher, Chicago (Journal A. M. A., Aug. 2, 1930), says that the neutral red test may be used as an aid in differentiating true and false achylia gastrica not because the dye is employed in this test but because a prolonged period is necessary to perform the test. Neutral red tests may be advantageously employed as a test of gastric function, just as any fractional method may be employed over a long period of time (more than sixty minutes). Neutral red possesses little or no property as a stimulant of gastric acidity.

ABBOTT LABORATORIES AND SWAN-MYERS COMPANY JOIN FORCES

In order to enlarge the strong research facilities and personnel of both companies, to expand the sales organizations and increase the distribution of their ethical pharmaceutical products, the Abbott Laboratories of North Chicago, Illinois and the Swan-Myers Company of Indianapolis, Indiana, have agreed to combine their resources and consolidate their management. This combination brings into one enlarged organization, two groups of people actuated by the same high standards in ethics, scientific research and controlled manufacture.

Membership Roster of the Arkansas Medical Society for 1930

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Neighbors, J. E. — Stuttgart
Park, Chas. E. — DeWitt
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Swindler, E. B. — Stuttgart
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Crockett, C. S. — Lincoln
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Duckworth, F. M. — Siloam Springs
Duncan, M. W. — Centerton
Estes, Neil — Rogers
Eubanks, F. G. — Decatur
Greene, L. O. — Pea Ridge
Gulledge, Jno. F. — Siloam Springs
Harrison, A. J. — Lowell
Highfill, E. J. — Cave Springs
Hodges, Guy — Rogers
Horton, C. W. — Hiwasse
Hughes, J. A. — Siloam Springs
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Love, Geo. M. — Rogers
McNeil, Clyde L. — Rogers
Montgomery, Chas. C. — Kansas City, Mo.
Moore, W. A. — Rogers
Pickens, E. A. — Bentonville
Pickens, W. A. — Bentonville
Powell, J. T. — Gravette
Ramsey, T. C. — Gentry
Scott, L. L. — Siloam Springs
Seeborn, N. A. — Siloam Springs
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Williams, J. R. — Siloam Springs
Wilson, C. S. — Gentry

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Jackson, G. I. — Harrison
Johnson, J. J. — Harrison
Kirby, F. B. — Harrison
McCurry, D. K. — Green Forest
Owens, D. L. — Harrison
Poynor, Wm. H. — Harrison
Routh, C. M. — Harrison
Watkins, W. L. — Alpena Pass
Weast, L. M. — Yellville

*Deceased.

BRADLEY COUNTY

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Ellison, Leroy E. — Warren
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Martin, C. N. — Warren
Martin, Rufus — Warren
Reasons, W. B. — Hermitage
Sheriff, J. P. — Pine Bluff

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Donaldson, C. W. — Green Forest
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John, J. F. — Eureka Springs
Pace, Henry — Eureka Springs
Parker, J. R. — Eureka Springs
Webb, J. H. — Eureka Springs

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Douglas, S. W. — Eudora
Easterling, Walter D. — Lake Village
Easterling, W. W. — Eudora
McGehee, E. P. — Lake Village

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McLain, J. T. — Gurdon
Moore, J. S. — Arkadelphia
Moore, W. M. — Arkadelphia
Ross, H. A. — Arkadelphia
Rowland, W. T. — Arkadelphia
Steed, C. J. — Gurdon
Tolleson, G. W. — Amity
Townsend, Chas. K. — Arkadelphia
Townsend, N. R. — Arkadelphia

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Hiller, J. P. — Pollard
Jones, F. H. — Piggott
Latimer, N. J. — Corning
*Lunt, J. P. — Rector
McGuire, J. E. — Piggott
Poole, W. I. — St. Francis
Richardson, M. C. — Corning

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Matthews, J. T. — Heber Springs

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Carter, John D. — Rison
Hamilton, A. J. — Rison
*Wilson, H. O. — Rison

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Hudnall, E. T. — Taylor
Jones, T. H. — Magnolia
Jordan, T. S. — Taylor
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McDonald, A. J. — Springhill, La.
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Walker, J. C. — R. 1, Emerson

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Hardison, T. W. — Morrilton
Halbrook, J. F. — Plumerville
Holloway, W. R. — Center Ridge
Jackson, J. H. — Springfield
Jones, R. A. — Perry
Jones, Wm. Edgar — Morrilton
Logan, B. C. — Morrilton
Matherly, W. E. — Harrison
Matthews, E. L. — Morrilton
Matthews, J. M. — Morrilton
Mobley, H. E. — Morrilton
Rieff, W. L. — Perryville

CRAIGHEAD COUNTY

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Altman, J. T. — Jonesboro
Baird, J. L. — Marked Tree
Barrett, R. M. — Black Oak
Bates, Chas. A. — Lake City
Burge, H. G. — Nettleton
Cohen, O. T. — Jonesboro
Cothern, Thad — Jonesboro
Ellis, Ira W. — Monette
Elders, J. W. — Harrisburg
Haltom, W. C. — Jonesboro
Harrison, B. F. — Trumann
Henderson, A. G. — Jonesboro
Horner, E. J. — Jonesboro
Howell, J. C. — Nettleton
Hunn, J. T. — Harrisburg
Jackson, W. W. — Jonesboro
Jernigan, Roscoe M. — Jonesboro
Lutterloh, Chas. H. — Jonesboro
Lutterloh, P. W. — Jonesboro
McAdams, H. H. — Jonesboro
McCracken, C. P. — Jonesboro
McCurry, John H. — Cash
McDaniel, L. H. — Tyronza
Nisbett, Frank — Brookland
Overstreet, W. C. — Jonesboro
Ramsey, J. W. — Jonesboro
Ratliff, R. W. — Jonesboro
Reagan, C. H. — Lake City
Scott, A. G. — Jonesboro
Sloan, Ralph M. — Jonesboro
Stevens, J. H. — Egypt
Stroud, H. A. — Jonesboro
Thorn, W. T. — Monette
Tullos, A. M. — Trumann
Verser, W. W. — Harrisburg
*Walker, B. F. — Jonesboro
Willett, R. H. — Jonesboro

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Dibrell, M. S. — Van Buren
Galloway, Q. R. — Van Buren
Grant, S. C. — Mulberry
Kirksey, O. J. — Mulberry
Mitchell, T. M. — Rudy
Reves, Wm. R. — Alma
Savery, H. W. — Van Buren
Stewart, Jno. M. — Van Buren
Wigley, J. A. — Mulberry

CRITTENDEN COUNTY

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Henry, Hugh B. — Walla Walla, Wash.
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Parker, A. C. — Clarkedale
Purnell, R. L. — Marion
Stevenson, B. M. — Memphis, Tenn.

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Lipsey, L. H. — Wynne
Longest, Ruffin — Wynne
McKie, J. D. — Wynne
McKie, W. H. — Wynne
Miller, J. S. — Parkin
Scott, Chas. — Wynne
Stewart, Thos. J. — Wynne
Wilson, Thos. — Wynne

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Taylor, J. E. M. — Sparkman
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Wilson, J. F. — Dalark

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Chenault, J. C. — McGehee
DeClark, W. H. — McGehee
Grayson, W. B. — McGehee
Isom, A. — Dumas
Kimbro, C. H. — Tillar
MacCammon, Vernon — Arkansas City
Miller, J. C. — McGehee
Smith, H. T. — McGehee
Watts, J. D. — Dumas
White, R. F. — McGehee

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Cotham, E. R. — Monticello
DeBolt, G. A. — Monticello
Duckworth, F. L. — Monticello
Gates, S. M. — Monticello
Kimbro, S. O. — Monticello
Pope, M. Y. — Monticello
Smith, R. N. — Collins
Wilson, J. S. — Monticello

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Burnett, M. C. — Wooster
Cook, Raymond C. — Atlanta, Ga.
Cureton, H. E. — Conway
Dawson, R. L. — Wooster
Dickerson, C. H. — Conway
Downs, J. H. — Vilonia
Dunaway, L. S. — Conway
Fraser, N. E. — Conway
Glover, A. J. — Guy
Hardy, H. B. — Greenbrier
Harrod, George — Conway
Henderson, G. L. — Conway
Ingram, E. M. — Enola
Kitley, J. R. — Mayflower
Lieblong, J. S. — Greenbrier
Mabry, Thos. — Holland
McCollum, I. N. — Conway
McDonald, W. T. — Vilonia
McMahan, J. E. — Conway
Munn, J. B. — Vilonia
Muse, J. M. — Conway
Smith, Marcus T. — Conway
Westerfield, J. S. — Conway
Williams, E. T. — Greenbrier

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Douglass, Thos. — Ozark
Gibbons, W. H. — Ozark
Hansberry, A. J. — Ozark
Mooney, J. D. — Altus
Peters, John — White Rock
Porter, W. C. — Ozark
Post, J. L. — Altus

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Blackshare, Wilbur M. — Hot Springs
Brewer, H. W. — Hot Springs
Browne, P. Z. — Hot Springs
Browning, E. R. — Hot Springs
Bruce, G. C. — Amarillo, Texas
Cassada, B. F. — Hot Springs
Chamberlain, Warren — Hot Springs
Chenault, H. C. — Hot Springs
Chesnutt, Jas. H. — Hot Springs
Clardy, Floyd — Hot Springs
Coffey, G. C. — Hot Springs
Collings, H. P. — Hot Springs
Connell, W. H. — Hot Springs
Dake, Chas. — Hot Springs
Deaderick, W. H. — Hot Springs
Diederich, V. P. — Hot Springs
Drennen, Chas. Travis — Hot Springs
Drennen, D. E. — Hot Springs
Duncan, M. D. — Mountain Pine
Eckel, G. M. — Hot Springs
Ellis, L. R. — Hot Springs
Fletcher, Geo. B. — Hot Springs
Freeman, I. N. — Hot Springs

*Deceased.

GARLAND COUNTY—Continued

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Hebert, Gaston A. — Hot Springs
Jackson, W. W. — Hot Springs
Jarrell, Foster — Hot Springs
King, Ossian H. — Hot Springs
Klugh, Walter G. — Hot Springs
Knoefel, W. R. — Hot Springs
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Laws, W. V. — Hot Springs
Lee, D. C. — Hot Springs
McKenzie, E. M. — Hot Springs
McLane, J. N. — Hot Springs
MacLaughlin, O. L. — Hot Springs
Martin, L. G. — Hot Springs
Merritt, J. F. — Hot Springs
Miller, C. S. — Hot Springs
Minor, J. C. — Hot Springs
Mobbs, Bert — Honolulu, Hawaii
Moss, Chas. S. — Hot Springs
Nims, C. H. — Hot Springs
Parks, Wm. P. — Hot Springs
Pate, C. N. — Hot Springs
Porter, Wm. F. — Hot Springs
Proctor, J. M. — Hot Springs
Purdum, E. A. — Hot Springs
Randolph, J. P. — Hot Springs
Robertson, J. A. — Hot Springs
Rowland, J. F. — Hot Springs
Sanders, T. E. — Hot Springs
Scully, F. J. — Hot Springs
Sharpe, S. B. — Hot Springs
Shaw, Ernest — Hot Springs
Shaw, J. B. — Hot Springs
Short, Z. N. — Hot Springs
Simpson, W. F. — Hot Springs
Smith, Oliver A. — Hot Springs
Smith, W. K. — Hot Springs
Snider, W. L. — Hot Springs
Steele, S. B. — Hot Springs
Stell, J. S. — Hot Springs
Stough, D. B. — Hot Springs
Strachan, J. B. — Hot Springs
Sullivan, A. G. — Hot Springs
Tarkington, Grayson E. — Hot Springs
Tarleton, F. S. — Hot Springs
Thompson, E. L. — Hot Springs
Thompson, Loyd — Hot Springs
Tribble, A. H. — Hot Springs
Vaughan, P. T. — Hot Springs
Wade, H. King — Hot Springs
Waldrop, J. G. — Hot Springs
Weil, S. D. — Hot Springs
Wenger, O. C. — Hot Springs
Wilkins, J. S. — Hot Springs
Wootton, W. T. — Hot Springs
Wright, Homer K. — Hot Springs

GRANT COUNTY

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Hope, O. W. — Sheridan
Kelly, O. R. — Sheridan
Paxton, Robert L. — Sheridan
Sheppard, Irvin — Sheridan

GREENE COUNTY

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Blackwood, W. J. — Rector
Bridges, G. P. — Paragould
Castleberry, F. L. — Jonesboro
Clopton, O. H. — Marmaduke
Cupp, R. W. — Paragould
Dillman, James A. — Paragould
Ellington, Walter E. — R. 6, Paragould
Ellis, B. E. — Gideon, Mo
Haley, R. J. — Paragould
Haley, Robert, Jr. — Paragould
Hardesty, C. A. — Paragould
Hopkins, G. T. — Paragould
Hudgins, J. J. — Paragould
Kennedy, E. L. — Marmaduke
Lamb, Jones H. — Paragould
Majors, W. M. — Paragould
Self, Scott Mack — Boydsville
Williamson, A. B. — Beech Grove

HEMPSTEAD COUNTY

Allison, Walter G. — Hope
Autrey, J. R. — Columbus
Cannon, G. E. — Hope
Carrigan, P. B. — Hope
Garner, W. M. — Hope
Gentry, J. E. — McCaskill
Lile, L. M. — Hope
Luck, J. L. — Hope
McDonald, Thos. Lee — Hope
Martindale, Geo. H. — Hope
Martindale, J. G. — Hope
Parker, W. P. — Hope
Robins, Rual, R. — Hope
Robins, Wm. F. — Ozan
Smith, Don — Hope
Weaver, J. H. — Hope
Wood, R. L. — Fulton

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Bramlitt, E. T. — Malvern
Hodges, T. L. — DeRoche
Hodges, W. G. — Malvern
McCray, E. H. — Malvern
Norton, J. M. — Donaldson
Pharr, J. W. — Malvern
Prickett, Chas. — Malvern
Williams, J. M. — Malvern

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Dildy, E. V. — Nashville
Gibson, W. M. — Nashville
Gosnell, C. E. — Bingen
Holt, J. M. — Nashville
Hopkins, J. S. — Nashville
Hutcherson, D. A. — Nashville
*Lee, Wm. Ridley — Mineral Springs
Roberts, J. L. — Nashville
Toland, W. H. — Nashville

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Churchill, C. A. — Batesville
Craig, M. S. — Batesville
Dorr, R. C. — Batesville
Evans, L. T. — Batesville
Gray, C. C. — Batesville
Gray, E. M. — Evening Shade
Gray, F. A. — Batesville
Haskey, J. M. — Morefield
Hinkle, Chas. G. — Batesville
Hooper, J. M. — Batesville
Jeffrey, Paul H. — Bethesda
Johnston, O. J. T. — Batesville
Kennerly, J. H. — Batesville
Laman, G. T. — Cave City
McAdams, V. D. — Cord
Pascoe, V. L. — Newark
Robertson, S. N. — Sulphur Rock
Rodman, T. N. — Batesville
Smith, Harlin H. — Calico Rock
Sullivan, E. L. — Poughkeepsie
Wood, O. S. — Salem
Woods, T. J. — Evening Shade

JACKSON COUNTY

Barr, A. F. — Pulaski, Tenn.
Best, A. L. — Newport
Causey, G. A. — Swifton
Elton, A. M. — Newport
Erwin, Ira H. — Newport
Gray, C. R. — Newport
Harris, M. L. — Newport
Ivy, Jno. B. — Tuckerman
Jamison, O. A. — Tuckerman
Justis, S. — Swifton
Kimberlin, K. K. — Tuckerman
Moore, W. P. — Newport
Morton, R. F. — Swifton
Norris, R. O. — Tuckerman
Owens, M. B. — Amagon
Pierce, W. N. — Tupelo
Slayden, L. T. — Tuckerman
Stallings, Walker E. — Boise, Idaho
Stephens, G. K. — Newport
Walker, H. O. — Newport
Watson, E. L. — Newport
Wilson, W. F. — Pleasant Plains

JEFFERSON COUNTY

Blankenship, W. H. — Pine Bluff
Capel, C. B. — Pine Bluff
Caruthers, C. K. — Pine Bluff
Chavis, W. M. — Pine Bluff
Clark, Oliver Wm. — Pine Bluff
Crump, J. F. — Pine Bluff
Cunningham, T. J. — Pine Bluff
Gill, J. F. — Pine Bluff
Gurney, J. O. — Pine Bluff
Hankinson, O. C. — Pine Bluff
Higinbotham, C. J. — Pine Bluff
Hughes, A. A. — Pine Bluff
Jenkins, J. S. — Pine Bluff
John, J. W. — Pine Bluff
Lemons, J. M. — Pine Bluff
Lowe, W. T. — Pine Bluff
Luck, B. D. — Pine Bluff
McMullen, E. C. — Pine Bluff
Palmer, J. T. — Pine Bluff
Pittman, W. G. — Pine Bluff
Power, Paul H. — Pine Bluff
Scales, J. W. — Pine Bluff
Shelton, M. A. — Wabbaseka
Simmons, Walter H. — Pine Bluff
Smith, S. E. — Pine Bluff
Spillyards, J. S. — Pine Bluff
Tankersley, Grace — Pine Bluff
Williams, Harry E. — Pine Bluff
Woods, R. P. — Altheimer
Woodul, T. W. — Pine Bluff

JOHNSON COUNTY

Barger, M. I. — Lamar
Burgess, M. E. — Sells, Ariz.
Burgess, Roy E. — Washington, D. C.
Boen, Albert R. — Clarksville
Hardgrave, G. L. — Clarksville
Horner, W. M. — Coal Hill
Hunt, E. H. — Clarksville
Hunt, Wm. R. — Clarksville
Kolb, J. S. — Clarksville
Ledbetter, H. A. — Hartman
Siegel, G. R. — Clarksville
Yates, E. W. — Gillham

LAFAYETTE COUNTY

Armstrong, R. L. — Lewisville
Baker, F. E. — Stamps
Keith, A. W. — Stamps
McKnight, J. F. — Bradley
Youmans, F. W. — Lewisville

LAWRENCE COUNTY

Allen, Marshall — Walnut Ridge
Ball, C. C. — Ravenden
Guthrie, T. C. — Smithville
Hatcher, Wright W. — Imboden
Hughes, J. C. — Hoxie
Johnston, Wm. — Hardy
Land, J. C. — Walnut Ridge
McCarroll, H. R. — Walnut Ridge
Neece, T. C. — Walnut Ridge
Robinson, W. J. — Portia
Stephens, J. M. — Williford
Stidham, J. H. — Walnut Ridge
Warren, G. A. — Black Rock
Watkins, Geo. Max — Walnut Ridge

LEE COUNTY

Bean, W. B. — Marianna
Beaty, W. S. — R. 1, Aubrey
Bogart, H. D. — Marianna
Chaffin, C. W. — Moro
Crawford, W. S. — Marianna
Hodge, N. C. — Marianna
Lewis, John F. — R. 1, Marianna
McLendon, Mac — Marianna
Russwurm, S. C. — Hughes
Wall, E. D. — Marianna
White, H. L. — Rondo
Williamson, O. L. — Marianna
Wilsford, A. L. — Moro

LINCOLN COUNTY

Corney, R. B. — Little Rock
Dixon, Chas. W. — Gould
McClendon, J. M. — Gould
Ringgold, G. W. — Gould
Thiolliere, A. C. — Gould
Wood, G. C. — Grady

LITTLE RIVER COUNTY

Castile, Herman — Foreman
Heller, H. E. — Foreman
Phillips, Paul H. — Ashdown
Ringgold, J. W. — Ashdown
Vaughan, W. E. — Rt. 2, Ashdown
York, W. W. — Ashdown

LONOKE COUNTY

Beaty, S. S. — England
Benton, T. E. — Lonoke
*Bowers, A. L. — Scott
Brewer, John F. — Kerr
Callahan, E. A. — Carlisle
*Corn, F. A. — Lonoke
Corn, F. A., Jr. — Lonoke
Crowgey, W. B. — Scott
Cunning, John R. — Lonoke
Cunning, John Ed — Colorado Springs, Colo.
Harris, Ernest H. — Coy
Kelly, M. D. — Lonoke
Newsom, W. H. — Louann
Scruggs, G. W. — Humnoke
Street, H. N. — Lonoke
Thibault, Henry — Scott
Utley, F. E. — Cabot
Ward, O. D. — England
Watson, Asa C. — Seminole, Okla.
Wells, John B. — Scott

MADISON COUNTY

Acree, W. E. — Huntsville
Dixon, C. B. — Kingston
Hill, N. J. — Hindsville

*Deceased.

MILLER COUNTY

Beck, E. L. — Texarkana
*Cargile, C. H. — Texarkana
Collom, S. A. — Texarkana
Dale, R. R. — Texarkana
Fuller, T. E. — Texarkana
Gardner, W. P. — Texarkana
Hibbetts, Wm. — Texarkana
Hunt, Preston — Texarkana
Kirkpatrick, R. R. — Texarkana
Kittrell, T. F. — Texarkana
Kosminsky, L. J. — Texarkana
Lanier, L. H. — Texarkana
Lee, A. G. — Texarkana
Lennard, F. M. — Texarkana
Longino, H. E. — Texarkana
Mann, A. H. — Texarkana
Mann, R. H. T. — Texarkana
Middleton, B. C. — Texarkana
Murry, H. E. — Texarkana
Smiley, H. H. — Texarkana
Smith, C. A. — Texarkana
Smith, J. K. — Texarkana
Webster, H. R. — Texarkana
Williams, J. T. — Texarkana

MISSISSIPPI COUNTY

Barksdale, Oscar — Wilson
Campbell, J. H. — Joiner
Crawford, H. F. — Memphis, Tenn.
Ellis, N. B. — Wilson
Fox, V. R. — Manila
Harwell, C. M. — Osceola
Hill, E. V. — Blytheville
Hosey, N. R. — Joiner
Hudson, T. F. — Luxora
Johnson, I. R. — Blytheville
Johnson, R. L. — Bassett
Luckett, J. A. — Dell
McDaniel, John, R. Jr. — Blytheville
Martin, S. P. — Blytheville
Masey, L. D. — Osceola
Morris, C. T. — Blytheville
Owen, Wm. M. — Armorel
Polk, J. T. — Forrest City
Saliba, J. A. — Blytheville
Sheddan, W. J. — Osceola
Sims, H. C. — Burdette
Smith, F. D. — Blytheville
Stevens, C. C. — Blytheville
Tidwell, J. L. — Drew, Miss.
Tipton, Paul L. — Blytheville
Usrey, M. O. — Blytheville
Washburn, A. M. — Blytheville
Wilson, C. E. — Blytheville

MONROE COUNTY

Boswell, W. L. — Clarendon
Bradley, W. T. — Blackton
Dozier, F. S. — Brinkley
Dunklin, A. J. — Clarendon
McKnight, C. H. — Brinkley
McKnight, E. D. — Brinkley
*Murphy, F. T. — Brinkley
Murphey, N. E. — Clarendon
Stout, L. H. — Brinkley
Terry, P. E. — Holly Grove

MONTGOMERY COUNTY

Campbell, C. A. — Mauldin
Freeman, W. D. — Mount Ida
McLean, J. H. — Caddo Gap
Robbins, J. D. — Oden
Simpson, L. A. — Norman
Stueart, J. B. — Caddo Gap

NEVADA COUNTY

Buchanan, A. S. — Prescott
Buchanan, G. A. — Prescott
Chastain, J. S. — Prescott
Dickey, A. B. — Prescott
Hesterly, J. B. — Prescott
Hesterly, S. J. — Prescott
Hirst, O. G. — Prescott
McDaniel, Thos. W. — Boughton
Pool, W. B. H. — Bodcaw

OUACHITA COUNTY

Byrd, E. J. — Camden
Clemens, J. P. — Mt. Holly
Early, C. S. — Camden
Hollingsworth, G. F. — Hampton
Jameson, J. B. — Camden
Kennedy, R. C. — Bearden
McGill, S. D. — Camden
McRea, W. T. — Borger, Texas
Partee, Norf G. — Stephens
Powell, B. V. — Camden
Purifoy, W. A. — Chidester
Rinehart, J. S. — Camden
Ritchie, C. E. — Ogemow

OUACHITA COUNTY—Continued

Robins, R. B. — Camden
Rushing, J. L. — Chidester
Sanders, Geo. P. — Stephens
Thompson, H. F. — Bearden
Thompson, J. S. — Stephens
Thompson, S. A. — Stephens
Word, N. S. — Camden
Worthington, W. L. — Camden

PHILLIPS COUNTY

Baker, J. P. — West Helena
Bean, J. W. — Marvell
Brown, E. T. — Lexa
Bruce, W. B. — Marvell
Butts, J. W. — Helena
Cox, Allen E. — Helena
Cox, Aris W. — Helena
Ellis, J. B. — Helena
Fink, M. — Helena
Henry, Morris — Helena
King, W. C. — Helena
Kultgen, Edward — Elaine
Nichols, J. W. — Helena
Orr, W. R. — Helena
Rightor, H. H. — Helena
Russwurm, W. C. — Helena
Storm, Geo. R. — West Helena

POLK COUNTY

Hawkins, B. H. — Mena
Hilton, J. G. — Mena
Johnson, C. F. — Hatfield
Lee, F. A. — Vandervoort
McElroy, F. Q. — Mena
Mullins, F. C. — Wicks
Watkins, P. R. — Mena

POPE COUNTY

Berryman, L. D. — Russellville
Drummond, H. S. — No. Little Rock
Griffin, E. P. — Atkins
Haney, A. C. — Russellville
Haster, E. J. — Dardanelle
Hood, Robt. — Russellville
Linton, A. C. — Hector
Millard, Roy E. — Dardanelle
Montgomery, W. A. — Atkins
Ross, C. J. — Dover
Scarlett, Wm. P. — Russellville
Smith, L. M. — Russellville
Smith, R. L. — Russellville
Tate, A. B. — Atkins
Webb, G. C. — Russellville

PRAIRIE COUNTY

Adams, Edward — DeVa'ls Bluff
Crockett, W. H. — Biscoe
Crow, L. M. — Des Arc
Gilliam, J. C. — Des Arc
Lynn, J. R. — Hazen
Parker, Jas. — DeValls Bluff
Parker, Luke — DeValls Bluff
Parker, Wm. M. — DeValls Bluff
Porter, T. G. — Hazen
Wilson, Jno. G. — Ulm

PULASKI COUNTY

Aday, L. C. — Little Rock
Allen, Hoyt R. — Little Rock
Arkebauer, C. A. — Little Rock
Atkinson, Shelby — North Little Rock
Bailey, W. E. — Little Rock
*Barlow, M. J. — North Little Rock
Barrier, L. F. — Little Rock
Bathurst, Wm. R. — Little Rock
Bennett, B. A. — Little Rock
Blakely, R. M. — Little Rock
Bond, S. P. — Little Rock
Brooks, C. M. — Little Rock
Browning, H. W. — Little Rock
Burns, Jos. A. — North Little Rock
Burns, W. M. — North Little Rock
Calcote, R. J. — Little Rock
Caldwell, Robert — Little Rock
Carruth, O. A. — Little Rock
Carruthers, F. W. — Little Rock
Cazort, Alan G. — Little Rock
Chesnutt, C. R. — Little Rock
Choate, H. L. — Little Rock
Compton, John N. — Little Rock
Coon, A. B. — Little Rock
Copp, Noel J. — Little Rock
Cosgrove, K. W. — Little Rock
Crawford, J. B. — Little Rock
Crawford, S. R. — Little Rock
Cull, S. T. W. — Little Rock
Cummins, Bryce — Little Rock
Cunningham, J. C. — Little Rock
Daly, M. G. — Little Rock
Daniels, Noble B. — Texarkana

PULASKI COUNTY—Continued

Darnall, R. F. — Little Rock
Davis, E. N. — Little Rock
Davis, J. C. — Little Rock
Day, E. O. — Little Rock
Delaney, J. P. — Little Rock
Dibrell, J. L. — Little Rock
Dibrell, Jno. R. — Little Rock
Dishongh, Howard A. — Little Rock
Dunaway, W. C. — Little Rock
Eubanks, R. M. — Little Rock
Fly, T. M. — Little Rock
Freedman, Theo — Little Rock
Freemyer, W. N. — Little Rock
Fulmer, S. C. — Little Rock
Fulmer, P. M. — Little Rock
Gann, Dewell, Jr. — Little Rock
Garrison, C. W. — Little Rock
Gray, A. F. — Little Rock
Gray, Oscar — Little Rock
Gray, W. E. — Little Rock
Gray, Wm. E., Jr. — Little Rock
Hawkins, Martin C. — Little Rock
Harris, R. P. — Little Rock
Hastings, Gordon — Little Rock
Hayes, John H. — Little Rock
Higgins, Homer A. — Little Rock
Hinkle, S. B. — Little Rock
Hoge, S. F. — Little Rock
Holmes, G. M. — Little Rock
Holloway, O. R. — Little Rock
Howell, A. R. — North Little Rock
Howell, Stacy C. — Little Rock
Howze, H. H. — Little Rock
Hubener, L. L. — Little Rock
Hudson, E. M. — Little Rock
Hughens, H. V. — Little Rock
Hurrle, F. E. — Little Rock
Hundling, H. W. — Little Rock
Hyatt, D. T. — Little Rock
Jackson, Geo. F. — Little Rock
Jewell, I. H. — Paris
Jobe, A. L. — Little Rock
Johnson, Glenn H. — Little Rock
Jones, H. F. H. — Little Rock
Jones, Horace C. — Little Rock
Jones, I. J. — Little Rock
Jones, J. E. — Little Rock
Jones, W. E. — Little Rock
Judd, O. K. — Little Rock
Junkin, S. P. — R. 4, Little Rock
Kilbury, M. J. — Little Rock
Kinsworthy, J. H. — Little Rock
Kirby, A. C. — Little Rock
Kirkham, Z. L. — Little Rock
Kory, R. C. — Little Rock
Kriesel, W. A. — Little Rock
Lamb, W. A. — Little Rock
Law, R. A. — Little Rock
Lenow, Jas. H. — Little Rock
Levy, Jerome S. — Little Rock
Lewis, Geo. V. — Little Rock
McAdoo, H. W. — North Little Rock
McCaskill, M. E. — Little Rock
McCormack, G. A. — Little Rock
McNeil, N. P. — Little Rock
McKinney, A. T. — Little Rock
McRae, W. M. — Little Rock
Mahoney, P. L. — Little Rock
March, C. J. — Fordyce
Matthews, W. M. — Little Rock
May, C. B. — Little Rock
May, Jno. R. — Roland
*Meek, Edward — Little Rock
Melson, Madeline — Little Rock
Melson, O. C. — Little Rock
Miller, W. H. — Little Rock
Moon, C. R. — Little Rock
Moore, R. B. — Little Rock
Mountford, A. H. — North Little Rock
Murphey, Pat — Little Rock
Oates, Charles E. — Little Rock
O'Connor, F. J. — Little Rock
Ogden, M. D. — Little Rock
Parmley, L. V. — Little Rock
Patterson, R. Q. — Little Rock
Pemberton, E. M. — Little Rock
*Pettus, C. S. — Little Rock
Ponder, E. T. — Little Rock
Pryor, R. E. — Little Rock
Reagan, G. W. — Little Rock
Reagan, L. D. — Little Rock
Reed, C. C. — Little Rock
Rhinehart, B. A. — Little Rock
Rhinehart, D. A. — Little Rock
Richardson, W. R. — Little Rock
Riegler, N. W. — Little Rock
Robinson, F. C. — Little Rock
Roe, Joseph — Little Rock

*Deceased.

PULASKI COUNTY—Continued

Rogers, C. D. — Little Rock
Rogers, Porter R. — Kingsland
Rosenbaum, C. A. — Little Rock
Runyan, J. P. — Little Rock
Sadler, W. L. — Little Rock
Sanderlin, J. H. — Little Rock
Sanford, S. M. — Little Rock
Saxon, R. L. — Little Rock
Scarborough, J. I. — Little Rock
Scott, Homer — Little Rock
Shearer, W. F. — Little Rock
Sheppard, J. P. — Little Rock
Shipp, A. C. — Little Rock
Shuffield, Jos. — Little Rock
Smith, Morgan — Little Rock
Smith, Randolph T. — Little Rock
Smith, W. F. — Little Rock
Snodgrass, W. A. — Little Rock
Snodgrass, W. A., Jr. — Little Rock
Spitzberg, Irving J. — Little Rock
Stover, A. R. — Little Rock
Strauss, A. W. — Little Rock
Summers, J. A. — North Little Rock
Switzer, D. M. — North Little Rock
Tenzel Pauline — Little Rock
Thatcher, Harvey S. — Little Rock
Thomas, P. E., Jr. — Little Rock
Thompson, G. D. — Little Rock
*Villars, H. F. — North Little Rock
Vinsonhaler, Frank — Little Rock
Walt, D. C. — Little Rock
Wassell, C. McA. — Columbia, La.
Watkins, Anderson — Little Rock
Watkins, John G. — Little Rock
Wayman, A. K. — Little Rock
Wayne, J. R. — Little Rock
Wayne, W. D. — Little Rock
Webb, V. T. — Little Rock
Weny, N. F. — Little Rock
White, E. H. — Little Rock
Wilkes, E. H. — Little Rock
Wilson, Paul W. — Huttig
Witt, C. E. — Little Rock
Zell, A. M. — Little Rock

RANDOLPH COUNTY

Bayan, Chas. E. — Pontiac, Mich.
Brown, J. W. — Pocahontas
Carrens, J. S. — Pitman
Hamil, W. E. — Pocahontas
Hughes, W. E. — Pocahontas
Hull, H. B. — Mammoth Springs
*Johnson, R. R. — Rt. 1, Walnut Ridge
Johnson, T. Z. — Pocahontas
Loftis, Jno. R. — Pocahontas
Pace, L. R. — Seminole, Okla.
Ryburn, James W. — Manson

SALINE COUNTY

Blakely, M. M. — Benton
Buckley, E. A. — Bauxite
Buffington, T. E. — Benton
Burks, J. A. — Benton
Corey, W. L. — Bauxite
Davis, W. S. — Owensville
Gann, Dewell, Sr. — Benton
Jones, C. W. — Benton
Walton, Chas. R. — Knoxville, Iowa
Ward, W. W. — Alexander
Watson, Thos. C. — Benton
Wright, J. D. — Mabelvale

SCOTT COUNTY

Bevill, Cheves — Waldron
Burnett, J. A. — Waldron
Duncan, B. W. — Parks
Duncan, F. R. — Waldron
Duncan, L. D. — Waldron
Jones, Paul — Mound Valley, Ks.
Sorrell, L. B. — Waldron

SEARCY COUNTY

Cotton, J. O. — Leslie
Daniel, Sam G. — Marshall
Dickens, G. W. — Leslie
Fendley, E. G. — Leslie
Heard, W. W. — Marshall
Henley, J. A. — Marshall
Leslie, J. O. — Marshall
Moore, W. T. — Everton
Roberts, E. E. — Gilbert
Rogers, Wm. F. — St. Joe
Wood, E. W. — Marshall

SEBASTIAN COUNTY

Amis, J. W. — Fort Smith
Benefield, C. E. — Fort Smith
Benefield, J. H. — Fort Smith
Bevill, S. D. — Fort Smith
Billingsley, C. B. — Fort Smith
Blair, A. A. — Fort Smith
Brooksher, W. R., Jr. — Fort Smith

SEBASTIAN COUNTY—Continued

Buckley, J. H. — Fort Smith
Bungart, C. S. — Fort Smith
Chapman, A. S. — Fort Smith
Coffman, J. S. — Lavaca
*Cooper, St. Cloud — Fort Smith
Dorente, D. R. — Fort Smith
Dorsey, H. C. — Fort Smith
Eberle, Walter G. — Fort Smith
Epler, E. G. — Fort Smith
Foltz, Jas. A. — Fort Smith
Foster, M. E. — Fort Smith
Freer, B. W. — Fort Smith
Gardner, Lycurgus — Fort Smith
Goldstein, D. W. — Fort Smith
Hall, Chas. W. — Greenwood
Hoge, A. F. — Fort Smith
Holt, C. S. — Fort Smith
Jeffery, T. E. — Fort Smith
Jeffery, Vogel — Kingfisher, Okla.
Johnson, Hugh — Fort Smith
Johnson, J. E. — Fort Smith
Jones, E. B. — Hartford
Jones, I. Fulton — Fort Smith
Kennedy, C. H. — Fort Smith
King, H. C. — Fort Smith
Krock, F. H. — Fort Smith
Little, J. E. — Fort Smith
McConnell, S. P. — Booneville
Means, C. S. — Fort Smith
Moulton, E. C. — Fort Smith
Moulton, Herbert — Fort Smith
Redman, Pierre P. — Fort Smith
Riddler, P. A. — Fort Smith
Riley, J. D. — State Sanatorium
Rose, Willis F. — Fort Smith
Ryan, I. A. — Fort Smith
Smith, H. H. — Fort Smith
Southard, J. D. — Fort Smith
Southard, J. S. — Fort Smith
Stevenson, E. H. — Fort Smith
Stevenson, J. E. — Fort Smith
Stubbs, S. P. — Fort Smith
Taylor, J. M. — Fort Smith
Ware, Bertram L. — Greenwood
Wilson, Cons P. — Fort Smith
Wolfermann, S. J. — Fort Smith
Woods, G. G. — Huntington
Wyatt, R. B. — Sulphur Springs

SEVIER COUNTY

Archer, C. A. — DeQueen
Clingan, A. J. — DeQueen
Dickinson, R. C. — Horatio
Graves, J. C. — Lockesburg
Hendrix, B. E. — Gillham
Hopkins, R. L. — DeQueen
Kitchens, C. E. — DeQueen
Norwood, M. L. — Lockesburg

ST. FRANCIS COUNTY

Biggs, J. M. — Heth
Bogart, J. A. — Forrest City
Bogart, Nall — Forrest City
Boggan, P. P. — Forrest City
Brown, J. T. — Forrest City
Caldwell, A. B. — Caldwell
Chaffin, E. J. — Hughes
Cord, Wm. R. — Heth
Davis, Luther — Chatfield
McCown, N. C. — Forrest City
McDougal, J. F. — Forrest City
Powell, Clyde V. — Round Pond
Rush, J. O. — Forrest City
Winter, W. A. — Widener

UNION COUNTY

Bush, T. J. — El Dorado
Cathey, A. D. — El Dorado
Colvin, A. R. — Strong
Cullins, Jno. G. — New York, N. Y.
Dickerson, D. A. — Louann
Elkins, W. N. — Junction City
Engle, C. G. — El Dorado
Falvey, J. C. — El Dorado
Ferguson, J. V. — El Dorado
Fincher, L. G. — El Dorado
Fleming, J. W. — Smackover
George, I. M. — El Dorado
Ginn, W. T. — Calion
Guthrey, J. E. — El Dorado
Harper, Wm. L. — Junction City
Irby, Frank L. — Wesson
Levine, David — El Dorado
Lyon, G. C. — Norphlet
McCall, Daniel — Lawson
McGraw, S. J. — El Dorado
McMath, J. T. — Strong
Mahony, F. O. — El Dorado
Mitchell, J. G. — El Dorado
Moody, T. C. — El Dorado
Moore, J. A. — El Dorado
Munn, E. J. — El Dorado
Murphy, Geo. D. — El Dorado

UNION COUNTY—Continued

Murphy, G. W. T. — Strong
Murphy, H. A. — El Dorado
Newton, W. L. — Smackover
Niehuss, H. H. — El Dorado
Nolan, J. W. — El Dorado
Patterson, W. L. — El Dorado
Prothro, E. W. — El Dorado
Purifoy, L. L. — El Dorado
Richardson, C. T. — Smackover
Ritterman, Henry — Norphlet
Russell, M. V. — El Dorado
Sheppard, J. K. — El Dorado
Sheppard, J. M. — El Dorado
Slaughter, J. Henry — Norphlet
Slaughter, J. W. — El Dorado
Smith, J. M. — Smackover
Tarver, Vernon — Huttig
*Thrower, W. W. — El Dorado
Vines, C. L. — El Dorado
Vines, F. P. — El Dorado
Wharton, J. B. — El Dorado
White, D. E. — El Dorado
Wozencraft, W. L. — El Dorado

WASHINGTON COUNTY

Bean, J. L. — Fayetteville
Briley, J. H. — Springdale
Callen, C. B. — Fayetteville

*Deceased.

WASHINGTON COUNTY—Continued

Callen, L. H. — Fayetteville
Cannon, J. S. — West Fork
Cooper, T. L. — Elm Springs
DeGroat, A. F. — Fayetteville
Ellis, E. F. — Fayetteville
Gilbert, A. A. — Fayetteville
Gregg, A. S. — Fayetteville
Harr, H. T. — Fayetteville
Hathcock, P. L. — Fayetteville
Henry, R. T. — Springdale
Kaemmerling, Gerhard — Fayetteville
McCormick, E. G. — Prairie Grove
Mock, W. H. — Prairie Grove
Moore, A. I. — Fayetteville
Morrow, F. R. — Fayetteville
Paddock, C. S. — Fayetteville
Roberts, D. C. — Fayetteville
Sisco, C. P. — Springdale
Swift, Chas. E. — Elkins
Walker, J. W. — Fayetteville
Wallace, Jno. M. — Fayetteville
Wood, H. D. — Fayetteville

WHITE COUNTY

Abington, E. H. — Beebe
Allbright, S. J. — Searcy
Clark, W. A. — Bald Knob
Emerson, A. G. — Bradford
*Evans, A. A. — Bald Knob
Hardy, F. P. — Center Hill

WHITE COUNTY—Continued

Harrison, A. G. — Searcy
Havner, J. B. — Beebe
Hudgins, A. H. — Griffithville
Jones, J. L. — Searcy
Little, R. L. — Judsonia
Moore, L. E. — Searcy
Parker, Orlie — Searcy
Peeler, C. M. — Pangburn
Sloan, Dewey W. — Beebe
Spain, A. L. — Letona
Tapscott, S. T., Jr. — Searcy
Biles, L. E. — Augusta

WOODRUFF COUNTY

Brewer, E. F. — Augusta
Brewster, B. — McCrory
Brown, E. B. — Cotton Plant
Dungan, C. E. — Augusta
Fraser, R. L. — McCrory
Gephart, R. T. — Cotton Plant
Hancock, W. G. — Cotton Plant
Hays, J. F. — McCrory
Maguire, F. C. — Augusta
Morris, J. W. — McCrory
Porter, M. A. — Hunter
West, J. H. — Grays

YELL COUNTY

Gillum, A. D. — Ola
Linzy, C. B. — Plainview
Montgomery, H. L. — Gravelly

Book Reviews

(Continued from page 127)

Minor Surgery and Bandaging.—For Use of the House Surgeons, Dressers, and Junior Practitioners. Twentieth Edition. By Gwynne Williams, M. S., F. R. C. S., Surgeon, University College Hospital. With 262 illustrations. Published by F. A. Davis Company, Philadelphia. Price, $3.50.

This book represents the 20th edition of this popular work. The chapters on fractures have been extended and the non-operative treatment of the commoner varities has been detailed more fully, with many illustrations.

Medical and Surgical Reports of the Episcopal Hospital.—Volume VI, Commemorating the Seventy-Fifth Year of the Hospital. Published by Press of Wm. J. Dornan, Philadelphia.

This book commemorates the seventy-fifth year of the hospital's existence. For this reason special articles reminiscent of the early days of the hospital have been included. A number of scientific articles follow, especially selected for this volume.

Primer on Fractures (Illustrated). Prepared by the Cooperative Committee on Fractures, Under the Auspices of Section on Surgery, General and Abdominal and Section on Orthopedic Surgery in Cooperation with Department of Scientific Exhibit of the American Medical Association. Published by The American Medical Association. 535 North Dearborn Street, Chicago. Price, $1.00.

This "Primer" is intended for use by both students and practitioners. It is not for the purpose of standardizing treatment, but to suggest what constitutes acceptable methods of treatment. It contains the material which found such favorable response on the part of the visiting physicians at the Scientific Exhibit of the American Medical Association.

The Surgical Clincs of North America.—(Issued serially, one number every other month.) Volume 9, number 5. (Philadelphia Number—October, 1929), 299 pages with 111 illustrations. Per Clinic year (February, 1929, to December, 1929). Paper $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

Among the 17 clinics in this volume we wish to mention that of Dr. W. Wayne Babcock. His demonstration includes: "Operative Decompression of Aortic Aneurysm by Carotid-Jugular Anastomosis," "Carotid-Jugular Anastomosis in the Treatment of Advanced Pulmonary Tuberculosis," "Phrenicotomy for Pulmonary Tuberculosis," "Spontaneous Progressive Pneumothorax Following Artificial Pneumothorax," "Musculospiral Palsy Following Treatment of Malaria by Injection of Sodium Cacodylate"; "Extensor Paralysis of the Foot Following Injection of Alcohol for Sciatica."

Practical Massage and Corrective Exercises with Applied Anatomy.—By Hartvig Nissen, Late President of Posse Normal School of Gymnastics; Superintendent of Hospital Clinics in Massage and Medical Gymnastics. Fifth Edition, Revised and Enlarged by Harry Nissen, President, Posse-Nissen School of Physical Education, Boston, Mass. Illustrated with 72 Original Half-tone and Line Engravings. Published by F. A. Davis Company, Philadelphia. Price, $2.50 net.

This book is worthy of its title, "Practical Massage." The First Part describes, "The Different Manipulations and their Effects." Part Two, "Applied Anatomy and Corrective Exercises with Various Lists of Exercises." Part Three, "Treatment of Various Diseases and Injuries, Including a Discussion on Flat Feet."

Book Reviews

Recent Advances in Preventive Medicine—By J. F. C. Haslam, M. C., M. D. (Edin.), M. R. C. P. (Edin.), D. P. H., Assistant Director, Bureau of Hygiene and Tropical Diseases, Director of Library Services, London School of Hygiene and Tropical Medicine, with a chapter on the vitamins by S. J. Cowell, M. A., M. B., M. R. C. P., Professor of Dietetics in the University of London, with 30 illustrations. Published by P. Blakiston's Son & Co., Inc., 1012 Walnut Street, Philadelphia. Price, $3.50, net.

This book deals with some of the more important aspects of modern preventive medicine, and with current opinion and recent study thereupon. Certain phases of eugenics, motherhood, infancy, childhood and industrial hygiene are touched on. The last chapter pertains to the direct prevention by active immunization against common colds, diphtheria and scarlet fever in which, in the proper sphere, the methods and the materials are of proved value.

Trauma, Disease, Compension—A Handbook of Their Medico-Legal Relations. By A. J. Fraser, M. D., Chief Medical Officer, Workmen's Compensation Board, Winnipeg. Published by F. A. Davis Company, Philadelphia. Price, $6.50, net.

In the preface of this volume the author makes the following statement: "This volume has been prepared in the hope that a useful purpose will be served by assembling the opinions of representative teachers and writers in the medical field on the very difficult subject of the influence of trauma in giving rise to subsequent conditions of disease. The subject is complex and the reference on the point in medical literature are generally scanty and casual."

Surgical Clinics of North America.—Mayo Clinic Number—February, 1930). Volume 10. No. 1. 174 pages with 82 illustrations. (Issued serially, one number every other month). Published by W. B. Saunders Company, Philadelphia. Price, Paper, $12.00; per clinic year; Cloth, $16.00 per clinic year.

In this number Dr. Charles H. Mayo and Dr. Claude F. Dixon present a most interesting case, "Ureteral Transplantation of Exstrophy of the Bladder." The technic of operation is given with illustrations. 17 other clinics are also well presented.

Sterilization for Human Betterment.—A Summary of Results of 6,000 Operations in California, 1909-1929. By E. S. Gosney, B. S., LL. B., and Paul Popenoe, D. Sc. Published by The MacMillan Company, 60 Fifth Avenue, New York. Price $2.00.

Part one of this book presents: The Facts; The Problems; The History; Effect of Sexual Life and The Operation. In part Two: The Conclusions, in which the author particularly points out that sterilization destroys no organ or gland in the body, and shows no effect upon sex desire, sex performance, or sex feeling of the subject.

INTERNAL DRAINAGE

The term "internal drainage" is used to designate the spilling of pus from a diseased bronchus to neighboring bronchi of either lung. William B. Faulkner, Jr., San Francisco (Journal A. M. A., Nov. 1, 1930), finds that internal drainage is a definite entity, and an understanding of it is important in both the diagnosis and treatment of pulmonary suppurations as well as in the prevention of postoperative pulmonary complications. Intrabronchial injections of iodized oil have permitted a study of internal drainage and of the factors on which it depends. Pus within a bronchus may spill to predetermined areas, depending on the posture of the patient, the site of the primary lung lesion and the patency of the bronchus. This drainage is especially marked when the pus is of low viscosity and of great quantity. The application of the principles of internal drainage has enabled Faulkner to localize more accurately the site of pulmonary abscesses, to lessen the number of patients requiring operation, to lower the operative risk, and to increase the percentage of cures.

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Original Articles

THE THERMAL BATHS IN THE TREATMENT OF SYPHILIS*

E. A. Purdum, M. D.
Hot Springs National Park

In presenting to you a discussion of the present day value of thermal baths in the treatment of syphilis, it may be of interest to refer briefly to certain historic records which have come down to us regarding the use of hot baths in the treatment of varjous conditions. It is evident from looking up the references that all primitive and later peoples of the earth made the use of water in various forms an important adjunct to any real or supposed medical knowledge which they had concerning the treatment of various afflictions of the human family, particularly those ailments wherein the skin was involved in various disease or degenerative processes, the more common references probably having been made to leprosy, syphilis and the more common skin disorders resulting in disfigurement.

As you all know, Biblical accounts tell us frequently of various pools and rivers which were supposed to have marked healing power along one or more lines, and, further analysis of these accounts, reveals that in some of these ancient waters used for healing purposes the results were supposed to come, not only from certain constituents of the water, but also from the belief that Divine influence or power existed in the waters also, while others were credited with their remarkable healing power on account of the water being hot as well as supposedly rich in various chemical substances of value to the sick.

Among the more important references, aside from the Biblical, are those mentioned by Josephus in his description of the thermal baths of Calirrhoe near the Dead Sea, which were resorted to by Herod. Homer frequently speaks of baths among the early Greeks and through Herodotus we are made acquainted with the intermittent spring near the Temple of Jupiter Ammon. The historic Pass of Thermopylae received its name from the hot sulphur springs nearby which have been in active use over two thousand years.

Although most of the nations of antiquity appear to have possessed baths, these were insignificant in comparison with the magnificent structures which sprang up in Rome after the completion of the great aqueducts. These have been fully described by several Greek writers and later Roman historians, the various establishments being known principally by the name of the Emperor in power from time to time, beginning about the reign of Agrippa, 21 B. C., and reaching their most prominent use around the reign of Diocletan, 302 A. D.

About the time of the overthrow of the Roman civilization many of these famous baths were largely destroyed and the principal aqueducts for the time being put out of use, but as civilization became more advanced in middle and Western Europe there were gradually established various spas and health resorts, some of which exist at the present time.

Probably the best account we have of the use of water in various forms in the treatment of disease during the early history of medicine has come down to us in the treatise written by Hippocrates on "Airs, Waters and Places."

In almost every century we find the names of one or more educated writers on the use of mineral waters, particularly by the earlier Charlatans, who have clogged the wheels of progress in this field. Among the advocates of water familiar to the present generation of

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

physicians may be found the names of Priessnitz, Baruch and Winternitz and at least a half dozen others deserving of mention.

While various American writers have given us accounts of mineral waters in first one part of the country and another, from time to time, probably the most comprehensive account was first given by Dr. John Bell, in 1831, and this was followed in 1855 by a second treatise, giving all the additional information the author had been able to obtain since the publication of the first work. In succession came "The Mineral Springs of North America," in 1873, by Dr. J. J. Moorman; and the "Climatology and Mineral Waters of the United States," by Dr. A. N. Bell in 1885.

The most complete enumeration was made by Dr. Albert C. Peale, under the auspices of the United States Geological Survey, in 1886, and appears in Bulletin 32 of the Geological reports. The next and last work of any considerable scope was that published by Dr. James K. Crook, of New York, in 1899. this volume being entitled "The Mineral Waters of the United States and their Therapeutic Uses" (1).

The attention being given to the use of thermal baths and other fever producing agencies in the treatment of syphilis during the last few years was first prominently brought to our attention by Wagner von Jauregg and his co-workers and in February, 1927, Mulzer read a paper before the Hamburg Society for Physicians summarizing the malarial treatment of syphilis up to that time (2).

In this country, Schamberg and Rule began their experiments about the same time that the above knowledge was being presented in Europe, Schamberg having kept in close touch with the workers abroad and, in September, 1926, he presented a report upon the therapeutic effect of fever in experimental rabbit syphilis and the thermal death point of spirochaeta pallida. In this report it was clearly shown that spirochaeta pallida are very susceptible to a moderate elevation of temperature, but that for its complete destruction a much higher temperature was required, it having been observed that a suspension of the organisms heated to 105.8 F. for three, four, five and five and three-fourths hours showed that at four hours the spirochetes became less motile and that at five and three-fourths hours motility had almost ceased and the spirochetes began to break up and become shorter and none of the rabbits injected with this suspension after the longer period of heat exposure developed any evidence of syphilis.

It was further shown in this presentation that it is possible to prevent syphilitic infection in rabbits after injection of the specific virus if the rabbits are given a series of baths at 113 degrees F. within three to four days after inoculation, an average rise of temperature in the animal of 4 degrees F. being induced (3).

In another contribution by the same authors, about eighteen months later, it was stated that additional experimentation had revealed the fact that after the injection of rabbits with syphilis, where the organisms had been subjected to high temperatures as stated above, that it was necessary to observe the period of incubation over a greater length of time than was at first supposed, as one animal developed a typical lesion eighty-eight days after the time of inoculation. This showed that, while the subjection of the spirochetes to higher temperatures had greatly reduced their viability, that nevertheless, they could remain quiescent in the tissues for a long time and gradually multiply and produce a lesion.

During this preliminary work upon animals, experiments were also being carried out upon patients as to the effect of high temperatures, particularly that produced by hot baths, upon the syphilitic process going on at various stages in the human body. It was soon found that what could be produced in animals did not necessarily follow in experiments upon individuals but much valuable information was gained and it was apparent that the effect of hot baths, or fever produced from other causes, was of marked benefit in the later types of syphilis, particularly those having involvement of the nervous system. There seemed to be little if any good accomplished in the primary and secondary stages, excepting a moderate increase in the general feeling of well being (4).

Frazier, in presenting his work upon the course of syphilis in rabbits who had been subjected to high body temperatures, concluded that body temperatures ranging from 106.2 to 110.6 F. (rectal) induced in rabbits by bathing in water at 113 degrees F. for fifteen minutes, at intervals of not less than twenty-four or more than forty-eight hours, resulted in definite inhibition of the clinical

progress of the disease in three animals inoculated with virulent syphilitic virus four days before the institution of the first ten baths and, in complete suppression of the infection in one of these animals, as judged by the transfer of testis and lymph nodes. Three control animals inoculated on the same day, with identical material, but not subjected to the bathing process, developed local syphilitic lesions at the site of inoculation within the usual period, and two of them later showed metastic lesions of the uninoculated testis.

In the attempt to produce elevations of body temperature within the range of those obtainable with safety in man, it was found that bathing rabbits in water at 107.6 F. for twenty minutes would, on repeated trial, produce elevation of temperature within the limits of from 103.5 to 106.7 F.

Coming now to the present day status of the effect of fever upon the later syphilitic manifestations of the human being, particularly those of the nervous system, it is of interest to note not only some of the outstanding works that have been done on this line, but also to call attention to the more important conclusions reached by the several authors who have given us the results of their investigations to date.

In the summary given by Cady and Ewerhardt a few months ago, concerning the possible adjunct of febrile body temperatures in Wassermann-fast syphilitic patients, it was concluded that while there was evidence that hot baths are useful in this condition, the data suggest, but do not prove, that the serologic reactions are rendered more liable during relatively short periods of heat therapy. Nevertheless, the improvement in the patients sense of well-being and the apparent serologic responses in a small percentage have led us to continue our observations on thermo-therapy in Wassermann-fast patients (6).

It being now fairly well established that fever therapy is of definite value in the later manifestations of syphilis, particularly those of the nervous system, it becomes necessary for one to choose from time to time the most valuable agent to use in the production of this state of fever. The consensus of opinion by those most active in this work has gradually narrowed down to the use of malarial inoculation for this effect, or the use of baths of high temperature to produce a similar result. The malarial therapy of syphilis is very satisfactory in some cases, but the mortality rate yet remains too high for this method of treatment to be handled by any except those well acquainted with this line of work and it must also be pointed out from the standpoint of practical experience in handling ordinary malarial cases over a period of many years that now and then we have cases which are very difficult to cure and in a similar way, in some of these patients inoculated with malaria for the treatment of syphilis, time will no doubt reveal the fact that some of them will continue to have malarial paroxysms even after treatment to the point that would ordinarily be considered curative.

We must also consider the difficulty in controlling the intensity of the malarial paroxysms in some cases, but at the same time take into consideration that the manner in which benefit is obtained from the malarial inoculation, while not being entirely clear, must evidently be favorably influenced by the fact that the plasmodium is, like the spirochete, a protozoan and therefore more likely to produce a favorable biologic change in the body that would antagonize a syphilitic process than might be expected from a bacterial agent, as the bacteria belong to the vegetative class.

In the use of hot baths, rather than inoculation with malaria in the treatment of syphilis, we have at our command a method which is available universally and one which can be used by other than those who are expert in the handling of this disease. One must not forget, however, that serious accidents may occur in carrying out this method unless a moderate degree of accuracy and observation are employed.

As stated in the earlier part of this paper, we have records since the dawn of our present civilization that hot springs have been used in the relief or cure of various afflictions of the human body during all the ages and we wish to call particular attention at this time to the fact that the Hot Springs of our own State have been used in a similar way for hundreds, if not thousands, of years, by not only the Indians, but probably inhabitants antedating them and certainly by the white man since not many years after his first occupation of the American continent.

All of you present at this meeting today are well aware of the fact that for many generations the syphilitics of this country have taken treatment in conjunction with the Hot Springs baths whenever opportunity afforded as they found by experience that therapeutic

results could be obtained in conjunction with the baths far in advance of any results that might be obtained at home, although the method of treatment might have been the same. It has often been remarked by me to patients coming to Hot Springs for specific treatment that no claim was made on my part as to any superior knowledge of drugs or treatment than in the case of their home physician, but that one might expect better results on account of the hot baths being taken along with the treatment than could be obtained otherwise.

Until the past few years, with the ever increasing experimentation opening new fields of knowledge, we have thought that the results obtained in the treatment of these cases was due mostly to the fact that by the increased elimination obtained from the baths, along with the satisfactory living routine, that the drugs used produced a more marked benefit by the transition through the body rather than by any total amount that might be present in the host at any one time. Now, with the knowledge that the heat element can be such a factor in the treatment of these specific cases, we feel that this effect of the hot baths has been probably the most powerful one in giving good results, aside from, of course, the specific action of certain drugs as such.

It is recalled at the present time by some of the older residents of Hot Springs that remarkable results were obtained back in the old days, before bath houses were built, by patients remaining in the hot water until a marked reaction was produced rather than by taking a more comfortable bath, as has been principally used during the past twenty-five years. This change from the old manner of taking the baths to that of the present date was probably brought about largely by the public demanding that they be treated without being made so uncomfortable as in the development of a high fever which takes place when one is immersed in our hot water for any considerable time. The greatest aid we have to offer in the light of the additional knowledge of the value of heat therapy in the treatment of syphilis lies in the fact that we have in this hot water the power to produce fever as desired without making the water nearly so hot as would be necessary if radio-active water were not being used.

Some of the ultra-scientific of our present day have rather belittled the reference to radio-activity in connection with the Hot Springs water, stating that the water does not contain sufficient radium to be of the value ordinarily stated, and it has been proven that a certain amount of water can be charged with a great deal more radium than is present in the Hot Springs water without as much effect upon the human system, but this is not sufficient evidence to disprove this fever producing quality of our water as, by practical experience over many years, this has been demonstrated very conclusively and I believe that in the future it will be found that the effect of this water upon the human system is due not only to its radio-active properties, but also to other chemical substances contained therein which have not been discovered or to an inter-action between the radio-active gases of this water and the chemicals contained therein in a manner not yet explained to us, remembering in this connection that we have in our present day chemical knowledge that is termed as katalytic action, which has never yet been fully explained.

In the use of our mineral water in producing this fever therapy for syphilis, we not only have the advantage of it not being necessary to carry the temperature as high as would be the case in the use of ordinary water but we have the additional proven evidence that the total metabolism produced by fever from this water is considerably more than that brought about by the use of ordinary water, as evidenced by the increased elimination of urea and similar products from the blood, a higher chemical content of the outpouring from the sweat glands and a greater increase in total solids of the urine, although the water intake is kept sufficient to keep the gravity of the urine from changing appreciably.

These facts, coupled with the accumulated experience and evidence through many years that results have been obtained in Hot Springs in many thousands of cases of luetic infection better than the afflicted individuals had been able to obtain elsewhere and all this taken in connection with the knowledge now existing concerning the value of heat therapy in these cases and also the fact that it is a relatively safe, and certainly a more economic method than that used by inoculation with malaria, lead us to conclude that we have right here in our State and in our Nation the greatest available asset in taking care of these cases of luetic infection, particularly those of the nervous system.

1. "The Mineral Waters of the United States and their Therapeutic Uses," by James K. Crook, A. M., M. D., Lea Bros. & Co., N. Y. and Phila., 1899.
2. Mulzer, P.: Deutsche Med. Wchnschr., p. 1077, 1927.
3. Schamberg, J. F., and Rule, A. M.; Arch. Dermat. and Syph. 14:243, 1926.
4. Schamberg, J. F., and Rule, A. M.; Arch. Dermat. and Syph. 17:322, 1928.
5. Frazier, Chester N.; Arch. Dermat. and Syph., 16:445, 1927.
6. Cady, Lee D., & Ewerhardt, F. H.; Amer. Jour. Syph., 13:313, 1929.

DISCUSSION

DR. W. M. BLACKSHARE, Hot Springs: Dr. Purdum told you what it takes to cure syphilis, I will tell you how it is done. Some two years ago Dr. Black and myself interested ourselves in doing some research in the use of hydrotherapeutic measures in the treatment of all types of neurosyphilis. We started our usual routine medical treatment in conjunction with the thermal baths. Briefly I will outline the treatment we are using. In a case of neurosyphilis after our diagnosis has been established and confirmed by the serological findings, we start the patient on neosalvarsan twice each week, bismuth, intramuscular, three times a week, daily injections of mercury and start the baths with the intention of getting a sublingual temperature of 100 degrees the first week, gradually increasing the temperature of the bath until a daily sublingual temperature from 102 degrees to 103 degrees is obtained. We try to give these baths daily during the entire course of theatment lasting from four to six weeks We have found that after two years we have been able to get the patients symptom free and serologically negative. How much the baths have contributed to the value of the medication we are not in a position to say, but we do know that we have obtained better results since we have been using fever baths and that the patients have been symptom free and serologically negative after two years on this line of treatment.

The number of treatments given depends upon the condition of the individual patient.

DR. C. T. DRENNEN, Hot Springs: I have listened to Dr. Purdum's paper with both pleasure and interest. The Doctors at Hot Springs National Park have ever been timid in discussing the merits of the hot waters at Hot Springs National Park. I think it opportune now after all these years that we come out and tell the truth about some of the therapeutic effects of these waters. I have had opportunity during the past thirty-five years to make many observations concerning this subject. Years ago we had what was vulgarly known as the "Old Raal Hole," which many hundreds, of all nationalities, frequented daily; all of them paupers, both male and female, white and black. Now most of these would get into the water where it was most cool and creep up the pool or pools where the water became hotter and hotter. Particular attention did I give to those suffering with syphiletic skin lesion and the latent type in many instances would heal as if by magic without any medication whatsoever. The earlier lesions were seemingly not so amenable to this treatment and required assistance, mercury and other syphiletic treatment, but principally mercury.

I doubt if anyone knows just how much radioactivity is contained in these waters or just exactly what it is that does the work, but it does it just the same. We do not know it all yet and I would defy any chemist today to tell me just what chemical actions or reactions take place in producing the fragrance of the rose. I have felt for many years that the benefits received were brought about by what is known as its alterative effects. We all know the tendency of acute diseases is either that of rapid recovery or death, whilst on the contrary, sub-acute or chronic diseases will neither get well nor die. I believe this is one of the underlying principles governing the therapeutic actions of the hot waters of Hot Springs National Park. Putting it in another way we are throwing a chronic or sub-acute condition into one that is acute and thereby changing conditions of the parts, if you please, and giving mother nature an opportunity to do her work.

DR. PURDUM, in closing: I wish to thank the gentlemen for their discussion. We have been rather timid, as the doctor said, to say much about the results obtained in Hot Springs from a drug standpoint, but nevertheless we know that since the advent of these experiments with fever in cases involving the central nervous system, if it is due to one element or another in the water, or a combination of these, it is time that those of us in this vicinity know it and that we should let others in this vicinity know it because it will be for the mutual good of all secondarily, and primarily for the benefit of those so afflicted.

WOOD'S MODIFICATION OF THE HODGEN SPLINT WITH MYODERMIC TRACTION APPLIANCE*

H. D. Wood, M. D., Fayetteville

Mr. President and members of the Arkansas State Medical Society, I am bringing for your consideration a modification of the Hodgen Splint for treating fractures of the femur. Not that this improvement will in any way change the principle that this Master Surgeon taught some of us more than half a century ago in the treatment of fractures of this bone. His method was to suspend the injured limb from the ceiling like Nathan R. Smith's anterion splint and make extension with adhesive tape to the limb below the knee with a cord passing over a pully at such an angle as to make the necessary extension and raising and lowering the limb with a Belaying pin. His splint was made with a single rod of iron bent at the foot with sufficient width and held in place near the body with loops on a bow, secured to each rod. It was bent at the knee to hold the limb in a slightly flexed position. A very simple device for caring for a fractured femur when the right kind of cloth was used passing under the limb and securely fastened to the rods on each side of the limb.

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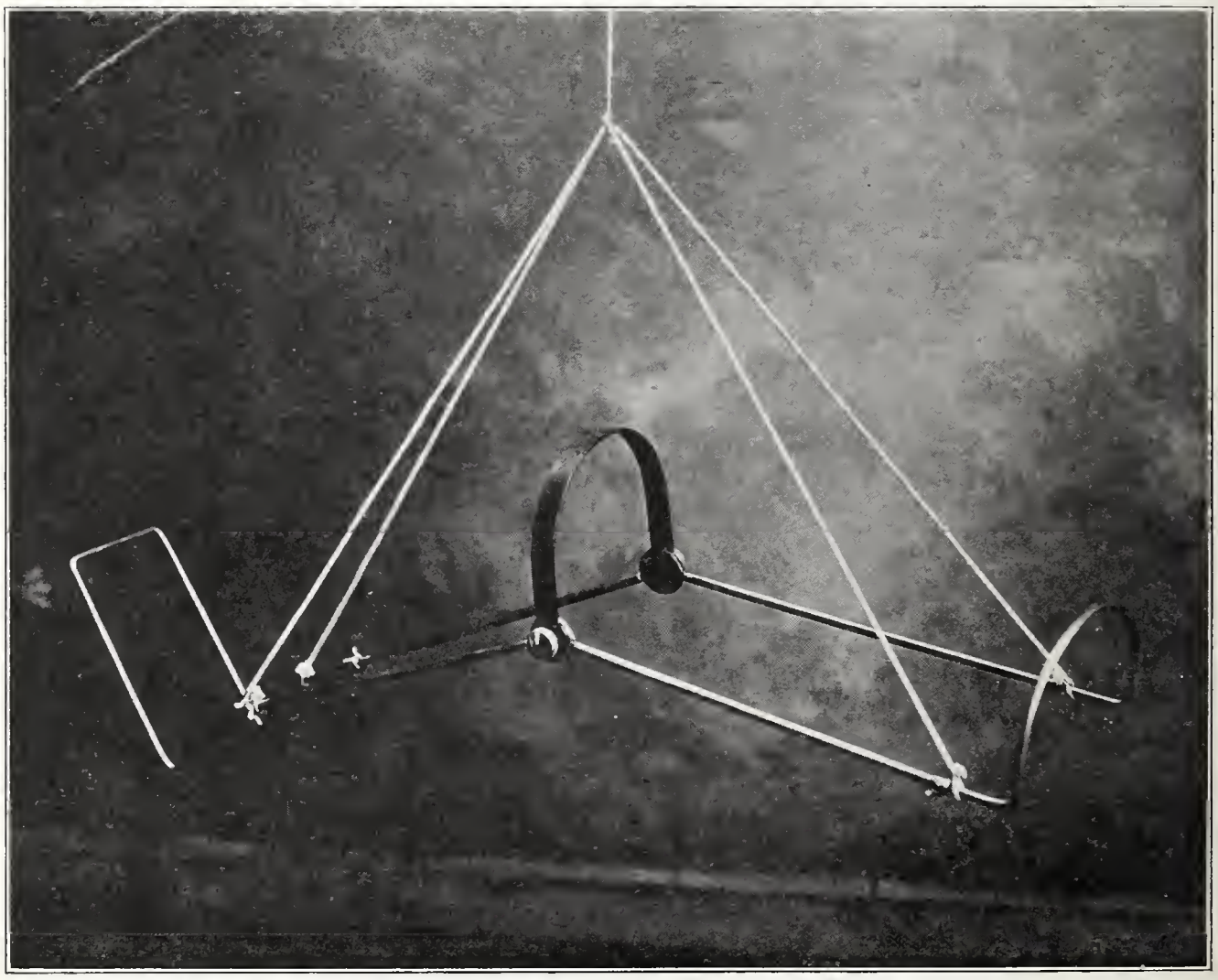
*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

You can see that the splint I am showing you is adjustable to different lengths of limbs, and has a foot piece to hold the foot in proper position. It also has a Ball Bearing Lock Brace at the knee that can be securely set at any angle. By this means the knee can be flexed in fractures of lower third of femur and allow the gastrocenmius muscle to become relaxed and permit the lower fragment of the femur more readily to fall in line with the shaft. In the same way when there is a fracture in the upper third of this bone flexing the knee towards the abdomen will bring the shaft in line with the upper fragment that has been tilted upward by the action of the soas and illiacus muscles, and give the fractured bone a better chance to fall in line and form a firm union. You can see that the limb will rest on the strips of ducking held in place by paper clips in place of safety pins.

I am showing you the perforated rubber sheeting that can be put on the limb over two or three thicknesses of gauze and then laced on the limb, as it will then grasp the muscles of the calf of the leg and will also adhere to the skin and make extension. So I have thought this device might very well be called a Myodermic Traction Appliance. If it can be made to take the place of skin traction or skeletal traction and enable us to pull our patients leg with less pain it will prove to be something of real service.

Dr. Hodgen tried to impress on his students the importance of using only a few pounds of weight to make extension as the constant pull of a light weight would soon tire or fatigue a muscle and cause it to relax. The heavy weights used by some surgeons, he said, were not necessary and I have found it so after many years of clinical experience. It will be 60 years in August or September since I put up a fractured femur in a Hodgen Splint, while I was an under-graduate and did this for my preceptor. I saw this man walking some months later with a slight limp.



H. D. Wood's Modification of the Hodgen Splint.
(Manufactured by the Fayetteville Machine and Tool Company)

It is with the hope of helping some of you gentlemen to take care of your fractured femurs in a more comfortable way for your patients and with less annoyance to yourselves that I present this paper.

The frame that I am showing you was first put up in our City Hospital in 1912. The Balkan Frame was used in the Balkan War in 1911. And as this frame is an Arkansas product by an Arkansas man, I am calling it "The Arkansas Frame." I know of no better way of securing it firmly to the patients bed than to use rubber tubing or pure rubber bandages with a figure of eight turn, to hold it firmly to the hospital bed.

INDICATIONS FOR AND AGAINST TONSILLECTOMIES WITH SUBSTITUTE TREATMENT IN SELECTED CASES*

H. J. G. Koobs, M. D., Rogers

Whether the faucial tonsil in any given case should be removed or not, is often a perplexing question to the conscientious surgeon. Especially is this so when the patient is referred to him by a colleague for the purpose of having the tonsils removed and after examination of the case he has doubts in his own mind about the necessity and indication for the operation.

So much has been said and written in late years about focal infection in tonsils and teeth being responsible for all sorts of other pathological conditions and symptoms, that the laity is rather expecting to have the removal of their tonsils and teeth recommended to them, regardless of what their particular complaint may be and, in fact, they frequently come to the doctors office having made their own diagnosis, saying: "Doctor don't you think I ought to have my tonsils or teeth out?" So, it is usually not at all hard any more for the doctor to get the patient's consent to have a tonsillectomy done.

When we look over our hospital reports now-a-days and notice that in the surgical section the number of tonsillectomies done is about as great as all other surgical cases combined, even including appendectomies, it makes one wonder if there is really justification for this wholesale attack on the tonsil outside of the fact that it is popular at present and therefore easy as a rule to get the patients consent, that it serves as a scapegoat so many times when the doctor is in doubt as to the cause of the patient's illness or complaints, that the tonsil is probably a useless organ anyway and that almost anyone who has an M. D. attached to his name feels competent to do this surgery.

I have had the experience a good many times, to have patients referred to me for tonsillectomy by other physicians, good men, whose judgment I ordinarily respect very highly, where, after careful examination of the patient I cannot see that a tonsillectomy is going to be of any benefit to that individual and so contra-indicated in that case according to my judgment. This creates a rather embarrassing situation as I do not think it is right to do this operation or, for that matter, any other operation unless there are definite indications for doing it, giving reasonable prospect of improving the patient's condition and doing them more good than harm. I feel that a good many of the profession have become over-enthusiastic about this operation and sometimes advise it done without good and sufficient reason.

Surely we are not justified, just because a tonsil is present, because its usefulness is doubtful, because it seems enlarged, because we can squeeze something out of the crypts, because we cannot easily find other causes for the patient's complaint or just because the mortality of the operation is low and the patient readily consents, to advise this operation and subject the patient to the inconvenience, expense and possibly more or less serious consequences envolved in this procedure unless there are indications sufficient to make it reasonably certain that a diseased condition of the tonsil is the etiological factor and that we can expect beneficial results from their removal.

I fully realize that diseased tonsils are frequently responsible for various ailments ordinarily embraced under those due to focal infections, aside from disturbances due to the local envolvement of the organ such as tonsillitis, peritonsillar abscess and other local pathological conditions and that the removal of the tonsil in many cases is strictly indicated and highly beneficial to the patient and because this is so, I am concerned about having this often very important and useful operation

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*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

done when it is *not* necessary and when the patient does *not* receive any benefit from such operation or that it is *improperly* done and the laity eventually will become distrustful of the procedure and will refuse to have it done when it is strictly needed.

Just recently I saw in the comic strip of a magazine the following joke: "Did you say that Jones still had his tonsils and appendix? Yes. Well if that's so he must be a Doctor."

About eight months ago I had the following experience: Mr. S., about 35 years old was referred to me for tonsillectomy by a colleague in a neighboring city, a doctor of unquestioned ability, a general surgeon himself who chooses, however, to refer his tonsil cases to a specialist, a man whose opinion I value very highly, but with whom I had to disagree, because on going over the case carefully I concluded that it was not the tonsils that were the etiological factors in this man's complaints, but that in my opinion he was suffering from an endocrine disfunction. I explained to the patient as tactfully as I could that I did not think he was quite ready for an operation and that I wanted to write to the Doctor who referred him to me and find out a little more about his condition. I wrote to my colleague, explaining to him what I found and gave him my opinion in the case, to which he replied that he thought the patient ought to have his tonsils out and just go ahead and operate. The patient came back, ready to have the operation performed and had the money in hand to pay me for the work. I remembered, however, that a few years ago I had a case come to me that seemed almost identical in the history and general findings where I did do a tonsillectomy without benefit to the patient and the patient died within a year from Addison's disease. So, I told Mr. S. frankly that I did not believe a tonsillectomy would do him any good and refused to operate. Subsequently, he went to see another doctor who agreed it was best to remove his tonsils and who did do a tonsillectomy for him (and I want to say to the credit of this surgeon that he did the man a nice, clean job)—but, about three or four weeks ago this same patient came back to me to tell me what had happened since he had last seen me and that he concluded I had been right in not wanting to operate as he was feeling no better and worse in some respects than before. Now I am waiting with interest to see what eventually will be the outcome of this case. I know that I am glad I did not operate.

A number of cases have come under my personal observation where tonsillectomies were done that apparently were not indicated or where the tonsillectomy alone was insufficient as the patient's condition was not improved and in several of these the ultimate outcome was not pleasant, especially, when counting the many cases that were improperly done, where the throat was more or less mutilated and pieces of tonsils were left behind. I believe I have said enough, however, to indicate to you why I felt called upon to write this paper and presume upon your valuable time listening to me on what may ordinarily seem a trivial matter.

As a foundation for this topic I deem it best to briefly review some of the Embryology, Histology, Anatomy, Physiology and Pathology of the palatal tonsil and related structures in order to remind you of these facts and make myself better understood.

While I have reviewed and shall quote in abstract form from some of the late texts such as Barnes, Jackson and Coates, Fowler, Hansel's review of the Literature on the Tonsil for 1929, published in the Archives of Otolaryngology, etc., which, aside from my own observations and practical experience have guided me in drawing my conclusions, I trust that I may be excused for the sake of brevity when I do not cite specific references.

The palatal or faucial tonsil is developed in the primary tonsillar fossa, the sinus tonsillaris, formed by a backward elongation of the second pharyngeal pouch and the formation of the palatal arches about the tenth week of fetal life. This sinus or fossa is lined by epithelium with its usual substantia propria. Solid sprouts of epithelium grow outward or down into the mucosa and presently lymphoid tissue develops and accumulates in the superficial fibers of the tunica propria, around these epithelial sprouts forming elevations on the surface. The centers of the epithelial sprouts undergo softening and degeneration and the sprouts become hollow, thus forming the tonsillar crypts. Simultaneously connective tissue fibers remain attached to the mucosa between these epithelial sprouts surrounded by lymphoid tissue and with the growth of the latter these are drawn out to form the connective tissue trabeculae and framework of the tonsil which later divide the tonsil into lobes. It is, usually, only after

birth that these masses of lymphoid tissue assume the more or less regular form of follicles. As these lymphoid masses, surrounding the epithelial plug which later becomes the crypts, grow, there is no regularity about their expansion and the crypts thus may become very tortuous, branched, pocketed and of various sizes and length.

For the sake of brevity and as for our consideration it is rather irrelevant, I make no mention of the formation of the lobes and plicas.

Histologically, it will be seen that the tonsil is developed really within the layers of the faucial mucous membrane, that on the oral side it is covered with mucous membrane which is continuous with the lining of the crypts and the pharyngeal and oral mucous membrane. That it is not a true gland at all but really only an accumulation of lymphoid tissue, and that the so-called capsul is really partly the deep layer of the substantia propria of the faucial mucous membrane and partly fascia covering the underlying muscles. It should also be mentioned that the tonsils are a part of a complete glasso pharyngeal ring of lymphoid tissue known as Waldeyer's ring in which are included the lingual tonsil, circumvallate papillae connecting lymphoid masses, palatal tonsils, lymphoid masses surrounding the openings of the eustachian tubes and the pharyngeal tonsil or adenoids.

It should also be mentioned that with the development of the follicles during the first year of extra uterine life, usually beginning about the 4th or 5th month, the follicular germinal centers produce vast numbers of lymphocytes which find their way into the cryptic epithelium and profoundly modify its character, apparently even absorbing the epithelial tissue altogether in places, but still leaving the cryptic openings. This is of importance when we consider the probability of toxic systemic absorption from infected cryptic contents later on, and whether or not a tonsillectomy may be indicated. This lymph activity is probably most marked during the latter part of the first and during the second years of life. Cessation of this activity is usually complete at about puberty and a partial regeneration of the cryptic epithelium takes place with gradual atrophy of the lymphoid elements.

The profuse proliferation of the lymphocytes and their pouring out into the crypt channels in early life is surely suggestive of the physiological action of the faucial tonsil and since the structure and function of all of the component parts of lymphoid tissue comprising the ring of Waldeyer is similar it may be assumed that the whole ring acts as an obstruction or protective barrier against the bacterial invasion into the lungs and gastro-intestinal tract, being instrumental in setting up a degree of immunity that assists the body to combat the stress and strain due to bacterial invasion from without. This function, effective probably only the first few years of life, may, however, soon be interfered with, for, as in all warfare casualties usually occur on both sides, so with the structures of the oro-pharyngeal lymphoid ring parts of it suffer from the invading bacterial hosts until they are put out of commission and become merely harbors of the enemy and so rather dangerous to the organism as a whole, (never loosing its capacity, however, for reconstruction or at least of becoming innocuous).

The muscles comprising the tonsillar bed are the palatoglossus (which forms the anterior pillar), the palatopharyngeous (which forms the posterior pillar), the superior constrictor of the pharynx, the styloglossus and the stylopharyngeous. Lately there has also been established the fact that a bundle of muscle tissue is constantly present which comes from the palatopharyngeous, pierces the capsul about the junction of the middle and lower third of tonsil, along with some of the connective tissue trabecalae, and has been called the tonsilopharyngeous.

The nerves supplying the tonsil and surrounding muscles are branches from the 5', 7', 9' and 11' cranial nerves with twigs from the vagus and sympathetic, the 5' and 9' especially forming the circulo-tonsillar plexus. Nerve trunks in close relation with lower pole of tonsil are the glassopharyngeal and linqual. Some of the sensory fibers from upper pole of tonsil enter the sphenopalatine or Meckel's ganglion in the nose.

The blood supply is normally all derived from branches of the external carotid, 5 in number, one coming in near lower part of anterior pillar, one near posterior pillar, one in bottom of fossa, near center, one about middle of fossa and one near center of upper pole of tonsil. The common carotid in the normal adult is located nearly an inch outward and backward from the posterior margin of tonsil, but has been found in an anomolous position

and close to the tonsillar fossa. The veins form a plexus surrounding and in the bed of the tonsil and empty into the facial and internal jugular veins.

The faucial tonsil does not seem to receive any lymph vessels draining any surrounding area and the lymphatics running away from it (the efferent vessels), drain into the superior anterior cervical gland, located just below the angle of the jaw, at the anterior border of the sterno-clydo-mastoid muscle. It is ordinarily spoken of as the tonsillar gland and is one of the important diagnostic guides in the question of tonsillar infection. In most all of the pathological conditions of the tonsil in which there is systemic dissemination of the morbific material, it is this gland which is likely to be enlarged and when this is the case in suspected chronic tonsillar infection, it is one of the principal indications for tonsillectomy, when accompanied by other signs and symptoms.

As only a very limited area outside of the tonsil has its lymphatics drain through this gland any diseased condition outside of the tonsil, but in this field, can usually be easily eliminated especially if the area anterior to the angle of the jaw, the submaxillary area and the inferior molars are remembered. It is well recognized that in very few of the acutely diseased conditions of the tonsil (whether enlarged or not,) or in an acute peritonsillar infection is a tonsillectomy indicated, unless it be in malignancies. This leaves the indication for tonsillectomy practically altogether with the chronically diseased tonsil and we may now inquire what, besides the real enlargement of the tonsil would constitute indications for its removal.

If we remember how the epithelium in the tonsillar crypts is degenerated, how debris is formed within the crypts, how bacteria are engulfed, how in the fight for supremacy between these invaders and the lymph tissue the latter is frequently over-powered locally, how such local area becomes then the nidus for the infection to propagate and spread out from, waiting for the opportunity afforded by periods of lowered resistance of the body to extend and wander to distant parts, if we remember how the crypts may become tortuous, sacculated and sealed at their outlets, how they extend down to the bottom of the tonsil tissue, *i. e.*, down to near the capsul, how the position of the crypts especially in the supratonsillar fossa is unfavorable to drainage, it is not hard to understand how a tonsil can easily become a menance to the general health of the individual and that it should be removed.

When the aforesaid condition exists it will usually be evidenced in the appearance of the tonsil, *i. e.*, there will be signs of inflammatory reaction (redness of the pillars at least), nodules may be seen and plugs of cheesy, often foul smelling and pus like material may be squeezed out from the crypts on pressure and the tonsil is usually enlarged. Again it must be remembered however that any tonsillar crypts may contain plugs of debris, that in fact this is more or less a normal condition, that these may even be foul smelling, and yet this is not pus in the ordinary acceptance of the term and it is erroneous to state that one can squeeze pus out of the tonsil when these ordinary plugs are forced out.

Everything depends on whether or not cryptal epithelium and basement membrane have been degenerated so that bacterial action can penetrate this normal barrier and absorption can take place from the crypts. When this occurs, then it is that we are likely to have the evidences of infection or toxemia and the tonsil becomes the focus of infection and as a result we may have a nephritis, endocarditis, pericarditis, appendicitis, gastric or duodenal ulcers, irido-cyclitis, keratitis, rheumatism, neuritis, arthritis and other general dyscrasia which are other and urgent indications for removal of the tonsil.

While the type of bacteria predominating in a tonsillar infection undoubtedly determines very largely the location and character of the systemic envolvement as complication, little can be learned from a microscopic or cultural examination of the cryptal contents or surface infection (unless perhaps almost a pure culture of a certain organism is present). A great variety of bacteria, especially of the streptococci are present in all tonsils whether they can be considered diseased or not.

Again, the apparent size of the tonsil may be deceiving and is no guide to be depended on in determining whether a tonsillectomy should be performed. Especially is this true in children. I have removed tonsils that seemed to be enormous in size to look at, nearly touching each other in the middle of the throat and after removing them they would be of about average size, the reason being that there was a shallow tonsillar fossa

with the tonsils projecting into the throat, while in other cases where there was a deep tonsil fossa and the so-called buried tonsil present that these would be quite large although not showing it on examination before removal. At any rate, a large appearing tonsil, especially in childhood, unless distinctly diseased, is no indication for its removal.

A tonsil that has once had a peritonsillar abscess or where there are recurrent attacks of subacute tonsillitis, should, for obvious reasons in most cases, be removed.

Again, the age of the individual plays quite an important role; I believe we can divide the tonsil cases according to age into four classes. The first being that from birth to the beginning of the sixth year. At this period of life no tonsillectomies should be done unless very urgently needed. During this period the pharyngeal tonsil plays a most important part, however, and if this needs removal on account of obstruction to nasal respiration with deformity of the hard palate, lips, etc., or because of middle ear infection, it is probably best to remove the palatal tonsils also, likewise if there is evidence of acute rheumatism, heart envolvement, chorea or nephritis. Unless these urgent conditions exist, however, I believe it is best not to operate until the year before the child enters the public school, if it is then still necessary. The second period in life is that from the sixth year to puberty or about twenty-five. This is the time when indications for tonsillectomy are most frequent, as by this time a tonsil that has been badly crippled is pretty sure to show the results of it and it is often well to anticipate serious envolvement of vital organs and remove infected tonsils as a prophylactic measure. Here again comes a time when the patient is near the age, say from twelve to sixteen, that by waiting a few months, if indications are not urgent, it may be done under local anesthesia. I believe to operate under local anesthesia is preferable in most cases if the patient is old enough to have a little will power, self-reliance and is willing to cooperate.

The next period in life is that from about twenty-five to fifty. While this is the best period for operation under local anesthesia, here the indications for tonsil removal become progressively less, however, unless the case was neglected during the second period in life spoken of and it is during this period especially that one has to be very careful to exclude other factors that may produce the illness for which the tonsils are so frequently held responsible. A careful history must be taken, a thorough physical examination given, blood and urine tests made and possibly some x-ray work done in order to determine not only whether the tonsil should be removed, but, also, whether or not that is all the patient needs done in order to give him reasonable assurance of getting the desired benefit as a result of the tonsillectomy. Endocrine function must be considered, para-nasal sinuses must be investigated, intra-nasal deformities and allergy must be thought of, condition of teeth and of pharynx must be noted, vicious habits reckoned with and so forth. It is manifestly wrong to give an individual a casual physical examination and to just look in his throat, see some rather prominent tonsils, maybe squeeze some so-called pus out of the crypts and say to him, "I think you ought to have your tonsils removed, they look bad and they are probably causing your trouble." How often have you done that, thinking, oh well, the tonsils are no use anyway, they had better be out. It is this, to my mind, careless viewpoint, that I have encountered so often, that I want to condemn and the principal reason for this paper.

Unless we feel reasonably sure, after careful investigation as suggested, that the tonsils are responsible either wholly or in part for the patient's condition for which relief is sought and if in part, that we see to it that the other part is also given proper attention, I believe a tonsillectomy to be contraindicated.

The fourth period of life is that above 50 years of age. Here again I think that a tonsillectomy is comparatively rarely indicated. First, because the symptoms suggestive of tonsil trouble are so frequently caused by other parts of the throat and oral cavity. While in youth the upper part of Waldeyer's ring plays a most important part in the production of symptoms, it is now the lower part of this ring that is most frequently responsible. It is now that the lingual tonsil and other lymph tissue below the faucial tonsil is so frequently diseased and not only a cause for chronic throat irritation and cough, but also acting as a focal nidus for infection or toxemia and must be reckoned with accordingly. Secondly because it is especially these cases where much can be done to help them by non-operative treatment.

While I have not had any personal experience with treatment of tonsils by x-ray, radium, or electro coagulation, I can frankly say from what I know about it that this does not appeal to me, except for the treatment of malignancies, but I have worked out a form of treatment in selected cases, especially for patients in this 4' period of life that I consider to be really worth-while and which has given me and many patients on whom I have used it, eminent satisfaction.

It consists principally in what I call the vacuum cleaning of the throat. If there is evidence of a chronic rhino-pharyngitis, I wash out the nose and epipharynx first with a warm isotonic solution of borax and sodium bicarbonate, next I lightly anesthetize the throat with a spray of a weak solution of cocaine, next I apply a glass vacuum cup attached to my suction apparatus, over each faucial tonsil and endeavor to empty the crypts as much as possible by suction. Next I curet off the lingual tonsil and lymph tissue over the entire back part of the tongue, next I apply thoroughly over the tonsils and tongue, also the lymph columns to either side of the pharynx, an antiseptic solution of either a 10 per cent silver nitrate, an iodine, iodide potash and tannic acid mixture, 5 per cent sol. of mercurochrome or a 1-1500 sol. of metaphen, usually alternating these applications at different treatment days. I finish this office treatment by using a bland soothing oil with a nebulizer in the nose and throat for a few minutes. I give them an astringent, antiseptic gargle to use with hot water two or three times daily for home treatment and teach them how to gargle in such a way that the muscles surrounding the faucial tonsils are contracted, squeeze upon the tonsils and so help to expel the cryptic contents. By good contraction of these muscles, especially the palatopharyngeous, the tonsil is everted into the throat, the crypts are opened, the tonsil is squeezed out and on relaxation some of the solution used as gargle is aspirated into the crypts. The office treatment is given twice a week for three or four weeks, once a week for four or six weeks more and occasionally later on if necessary. If some of the crypts appear to be cystic or do not empty well after the first treatment, I frequently open or enlarge them with a knife before suction. It is surprising how nicely most patients respond to this treatment, how the inflammation will leave the throat, how the irritating cough will subside, how a swollen tonsil will retract and how satisfied the patients usually are. Proper elimination is insisted upon, the drinking of plenty of water is urged, and tablets of Cinchopyrine are given if needed for relief of pain.

This treatment has served me better in cases of arthritis (which of course is most common in moderately advanced age), than a simple tonsillectomy. In fact I have seen very little good results in this malady from the surgical removal of focal infections although we usually recommend it.

DISCUSSION

DR. R. H. T. MANN, Texarkana: According to Dr. Barnhill, of Indianapolis, President of the American Academy of Ophthalmology and Otolaryngology, there are in the United States today 2,500,000 people with weak hearts due to tonsil infection. That was Barnhill's statement last fall at Atlantic City. The only known people in the world that don't have enlarged tonsils and adenoids are the Eskimo living along the coast of Labrador. It is not always an easy matter to tell an infected tonsil.

I have had unusual experience in this work, because I have done special work for very large railroad hospitals where there was no money in it and I have been able to follow the results in this class of work. The chief surgeon of the Cotton Belt Railroad, who has now moved away, was a sufferer of sciatica for ten years. He told me, "I have had my throat examined by ten specialists and they say my tonsils are all right." I looked at his throat and said, "You get your tonsils out." He did, and has been a well man since that time.

Now, a tonsillectomy in a man past fifty years of age is just as easy of performance and just as safe a procedure as in one 30 years of age, if you know how to do it.

There is not any difference as far as the final results are concerned. The fact of the matter is that very many of these infirmities we have laid to old age that are not to be laid to old age, but are infections. When a man gets to be 50 years old, the prevailing idea is that he has to go around with rheumatism or something like that. His teeth begin to decay, he hasn't as much resistance as he formerly had and his tonsils or his sinuses give him trouble and he is suffering from infection. He is not suffering from old age at all. Age has nothing to do with it. I have removed tonsils in two or three patients 67 years old and very recently I removed tonsils in a woman 70 years old.

One other point I want to bring out is a simple comparison, comparing a patient to a man in a leaking boat crossing a river. He may have many leaks. His tonsils may be one, his sinuses may be another, his prostate may be another. Now, as a rule, if you stop one of those leaks your patient will go further, just as if you stop one leak in the boat. If you stop two leaks, he will go further still. If you stop three leaks, he will go still further. Of course, you may not be able to stop all leaks. A man is different from a leaking boat because the boat has nothing to help it in stopping the leak. But you know it is the tendency of nature to cure a man and if you stop

some of these leaks nature may come to your rescue and often does come and stop the rest of them.

DR. P. L. MAHONEY, Little Rock: It has been stated that at least 250 diseases are the result of focal infection and that in 75 per cent of these cases the focus was located in the teeth, tonsils and sinuses. If that is true, then all cases that present themselves for the alleviation of some focal infection require a thorough physical examination. The causative factor in tonsillitis, acute or chronic, is often overlooked. The teeth, gums and sinuses are often causative factors. The patient should be first thoroughly examined and the doctor should not content himself with the removal of the tonsils without the elimination of every other foci of infection. If he is going to obtain results, he should never content himself with the removal of one focus of infection and expect a cure. He should satisfy himself that all foci have been removed. Dr. Mann gave a very apt comparison.

DR. EARLE HUNT, Clarksville: The doctor's paper was so long I didn't have time to digest all of it. I don't think that he agrees with the consensus of opinion of most men who are taking tonsils out. He told us that he did not take some out but gave no reasons. Consequently, I don't know what tonsils to take out by his paper. Any case that has recurring attacks of tonsillitis, I consider that the tonsils should be removed. I haven't heard any one talk yet who could tell me what tonsils should not come out.

As to Dr. Mann's statement that old age is no contraindication for the removal of tonsils, personally, I have refrained from removing tonsils in these older people. I have six cases at home now and they are in the wealthiest families in my community. They are above 70 years of age, and I wish I could get up nerve to take their tonsils out because I know the money is mighty good. Here is their history: All of these cases had recurring attacks of sore throat when they were children; then they had a quiescent period that extended from childhood up until the last four or five years, and these poor old sufferers are having tonsillitis. One of these patients happens to be my mother. She never had a sore throat in her life from the time she was a child until within the last four years. They did not recognize tonsillitis way back in years gone by as much as we recognize it now. But I think if we will go back into their childhood days and get the history of recurring sore throat, and they have some focal infection, some rheumatic pain, I think those tonsils should be removed, just under suspicion.

DR. J. N. McLANE, Hot Springs: We not infrequently are consulted by patients who have defective hearing and without a complete examination they are advised to have a tonsillectomy. These patients not infrequently have an otosclerosis or a chronic otitis media and hence the tonsillectomy does not relieve their defective hearing.

I was glad to hear the Doctor bring out one point, and that is the use of the x-ray and radium in the treatment of chronic tonsillitis. I think those cases that are treated with the x-ray or radium are the patients who in later years develop an arthritis with the tonsils as the foci of infection.

DR. KOOBS, Closing: I expected that I would stir up a hornet's nest and I have done it. If I can get most of you to consider this matter in a unbiased way, however, I feel that my efforts will not have been in vain. I said nothing against tonsillectomy when it is indicated. The paper was too long, as some one suggested, but I thought it was necessary to mention what may be considered fundamentals, in order to make myself clear, and to justify my dictum. When it is printed, if you will be good enough to read it over carefully I think some of you will probably change your mind in some respects. I am reminded of a modern young woman, who said to the doctor after the baby was born, "Well, doctor, why not take out babys appendix right away, while you are treating the naval cord, because it is of no use." Maybe that will apply to the tonsils according to some view-points.

Abstracts

OBSERVATIONS OF A LARYNGOLOGIST

R. C. Lynch, New Orleans (Journal A. M. A., December 13, 1930), relates some of his experiences in practice and makes some clinical observations: for instance, vocal nodules, either in young children or in adults, a retention cyst, and the earliest manifestation of cancer are the only tumors that grow from the free edge of the vocal cords. Fibroma, angioma and their combinations, pedunculated tumors of various types, all start on the under or the upper surface of the cord; this is also true of hemorrhagic blebs. Contact ulcers are the results of excessive abuse of the voice during acute inflammatory reaction. All other ulcers are of special etiology. A simple chronic ulcer never occurs in the larynx; its etiology must be sought for. Single pedunculated papilloma in the child is different in its behavior from the multiple type; the prognosis is better. Dissection with the aid of suspension gives the best results. The same tumor in the adult is practically always malignant. The earliest carcinoma of the larynx springs from the middle third of the vocal cord. Eight cases of metastasis to the lung have been observed in truly intrinsic cases, all discovered by accident, four substantiated by autopsy. Diathermy coagulation under suspension is of real value in properly selected cases; chloroform is used. All laryngectomies are done in one stage. Biopsy should be done only if operation is agreed to; under this plan, no evidence of harm thus far occurred. Deficiencies in diet, allergic states, endocrine unbalance and low akinetic exposure from the etiologic quadrad of sinus disease in children; any one, any combination or all four may be the fault. Infection with pathologic change

(Continued on pages 150-160)

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

A CHRISTMAS GREETING

I will honor Christmas in my heart
And try to keep it all the year.
—Charles Dickens.

Once again comes the great festival of the year, Christmas, and throughout all Christendom there will be joy, feasting, gift giving, social visiting and the reiteration of the familiar words, "Glory to God in the highest, and on earth peace, good will toward men," from pulpit and press.

Hundreds of writers in prose and poetry have written of this festival, dating as it does to centuries before Christianity arrived when the ancient sun worshippers observed the new birth of the sun after the shortest day, and which festival was adopted as the anniversary of the birth of Christ, the Son of Man, the actual date being nowhere recorded.

Almost all who have written their views on Christmas, stressing what they call "the spirit of Christmas" and the yuletide, inferentially convey the idea of a one-day celebration. Shakespeare wrote "This day shall change all griefs and quarrels into Love." "This day" seems to be the burden of their songs and maxims. One writer indeed, Susan Coolidge, wrote in a somewhat different strain. She said:

"We ring the bells and we raise the strain,
We hang up garlands everywhere
And bid the tapers twinkle fair,
And feast and frolic—and then we go
Back to the same old lives again."

Is not the Dicken's idea infinitely better—to keep the Christmas spirit all the year?

It is not enough to spread around good cheer, joy, good feeling for a day and go back on the morrow to selfishness, greed, indifference to others' troubles and need—just as there are those who are religious on Sunday and forget religion all the week.

It is useless to deny, however optimistic as we may be, that prosperity has not yet returned. There is much unemployment in Arkansas, as well as elsewhere; the drouth has caused heavy losses, there is distress, poor business, bad conditions—all the more reason and the greater need that we keep the Christmas spirit all the year rather than to give a

few gifts to friends and kinfolks and perhaps some food and clothing to the needy just for a day and then forget the virtues of generosity and helpfulness to such as are less fortunate than ourselves.

As to conditions being unsatisfactory, it is well to recall the words of the poet Dryden:

"The good we have enjoyed from Heaven's free will
And shall we murmur to endure the ill?"

Granted that conditions are bad—they might be worse and we have cause to be thankful that they are not worse. When the library of Valincourt was destroyed by fire he said "A man must have profited very little by his books if they have not taught him how to part with them." Seneca wrote a great truth in the lines "Misfortunes cannot be avoided; but they may be sweetened if not overcome and our lives made happy by philosophy." Mankind is given to worrying over trifles, forgetting that in fact everything matters a little, but nothing matters very much.

And so, in wishing our readers a happy Christmas, which will be made happier by helping happiness to others, we will again commend to their attention the words with which we began:

"I will honor Christmas in my heart
And try to keep it all the year."

SUPREME COURT OF MINNESOTA UPHOLDS BASIC SCIENCE LAW

On October 10, 1930, the Supreme Court of this State declared the 1927 Basic Science Law constitutional in a splendid opinion written by the Hon. Andrew Holt, Associate Justice. The decision of the Court was unanimous. The rendering of this decision is of tremendous importance not only to the people of the State of Minnesota, but to the medical profession as well. It is the first time in the history of the United States that the constitutionality of a Basic Science Law has been passed upon by a State Court of last resort. Again Minnesota pioneers in the field of legislation designed to more adequately protect the public health, to raise the standards of the medical profession, to eliminate quackery and to make it possible to more effectively dispose of the quacks who for years have been preying upon the sick.

The Minnesota Basic Science Law was enacted on April 12, 1927. It was passed in the Senate by a vote of sixty-one to two. It was then passed in the House by a vote of one hundred eleven to seven. Thereafter it was repassed in the Senate by a vote of forty-four to one. The overwhelming vote in favor of the law clearly indicates the wonderful work done by the Minnesota State Medical Association and the Legislative Committee headed by the very able Dr. H. M. Johnson of Dawson. The vote also indicates the broad-minded and receptive attitude on the part of the Legislature to enact a law that was extensive in its scope and one that had provisions in it for the enforcement of the law after its enactment. The law is a tribute to the intelligence of the Legislature and we feel that credit should be given where credit is due, particularly in these days of unrest and criticism.

Following the enactment of the Basic Science Law the State Board of Medical Examiners set in motion the machinery provided in the law for its enforcement. The annual registration fee paid in January of each year by every physician and surgeon registered in this State was made available for the enforcement of the various provisions of the law. This money is in the custody of the State Treasury and is expended by the Board as the law requires. The Medical Board has been engaged in a vigorous campaign of prosecuting those who have been practicing healing in the State without lawful right. The Board is also making every effort to make Minnesota as uninviting as possible for quacks in other States. We are certain that the Board has the united support of every member of the medical profession in their efforts. It was this work on the part of the Medical Board in connection with a recent case that precipitated the present decision in the Supreme Court.

The opinion written by Justice Holt clearly indicates that very careful consideration was given the law and it is interesting to note some of the matters contained in the opinion. Before this is done it might be well to consider some of the objections raised against the law. The first serious objection raised against the law was that the Legislature had no right to authorize the issuance of Basic Science certificates to those lawfully engaged in the practice of healing at the time of the passage of the law. To this the Court said:

"The law is neither arbitrary nor unreasonable in the respect of treating those already licensed as compared with those to be licensed after May 1, 1927."

The Court further said:

"No one can legitimately object to laws raising the standard of knowledge which might aid in the treatment of human ills by those engaged in that calling."

Another contention against the law was that it was unreasonable and arbitrary for the Legislature to classify those engaged in the practice of healing. That is, to make special provision for dentists, nurses, midwives, masseurs and the like.

To this contention the Court said:

"Each occupation comes in contact with the human body and may affect its well-being, but none of them relates to what is generally understood as taking charge of persons affected with disease or bodily injury to effect a cure, if we except dentists."

The Court further said:

"With the wisdom of legislative classification, courts are not concerned. In laws of this sort all evils cannot be reached at once, nor every desirable object gained in one legislative session."

We wish to emphasize the significance of the last quotation. It is not possible in this day and age to secure the enactment of every desirable law at one session of the Legislature. Conditions change; new methods of quackery are devised; new cults are formed and laws must necessarily be enacted from time to time to meet these conditions. The Court clearly emphasizes the right of the Legislature to recognize degrees of harm and to proceed step by step and to enact laws that presumably hit the evil where it is most felt.

Minnesota Medicine.

Abstracts

USES AND LIMITATIONS OF SKIN TESTS IN ALLERGY

In recent years the use of protein skin tests in the etiologic diagnosis of allergic disease has become increasingly popular. Because of the inherent difficulties and limitations of these tests, much disappointment and criticism have resulted, asserts Samuel M. Feinberg, Chicago (Journal A. M. A., Nov. 29, 1930). Sensitization tests should be considered only as laboratory guides. There are many limitations to the value of skin tests in allergy. Negative skin tests do not necessarily mean an absence of sensitization to these substances. Positive tests do not necessarily indicate the cause of the clinical symptoms. Complicating factors may be more important than the allergy. The difficulties may be met chiefly by employing, when necessary, other methods of testing, such as intracutaneous, subcutaneous, conjunctival, nasal and passive transfer; by clinical trials and elimination diets; by a broad knowledge of the clinical correlation and clinical experience in allergy; and by a willingness on the part of the clinician to consider other causes than allergy.

CLINICAL SIGNS OF HEART DISEASE

James B. Herrick, Chicago (Journal A. M. A., Nov., 29, 1930), asks: Why should not physicians employ in diagnosis the classification suggested by the Heart Committee of the New York Tuberculosis and Health Association, which is in conformity with the nomenclature for cardiac diagnosis approved by the American Heart Association? The case of aortic leak might then be called syphilitic aortitis with aortic regurgitation, cardiac hypertrophy, regular sinus rhythm, class 2 A; i. e., activity slightly limited. Here the etiologic and pathologic anatomic features are plainly set forth with the clinical and functional facts also considered. The case of mitral stenosis may be described as rheumatic mitral disease with stenosis, auricular fibrillation with activity seriously limited, classed briefly as class 2-B. Again, etiology, anatomic pathologic lesion and functional capacity are expressed. All of these features may with advantage be included in the diagnosis. In a discussion of clinical signs of heart disease with particular reference to etiology, the questions involved are difficult, the answers somewhat uncertain. Too many cases are encountered in which even with greatest care the cause of the cardiac symptoms may escape detection. But it is only by trial and search that knowledge will come. The search for causes, the comparison of results, together with statistical, clinical and necropsy studies will enable one to be more accurate in the diagnosis than has been the case in the past. To be impressed by the lack of uniformity in diagnosis, one has only to go to the health department of any large city and look over the causes of death as recorded on the death certificates. Syphilis as a cause

is rarely put down, largely because of the physician's desire to shield the reputation of the dead man and his family. Pericarditis, endocarditis and myocardis and angina pectoris are in evidence. On the whole, the diagnoses are vague and lack uniformity. A statement on the death certificate as to the cause of the disease, or even that the cause was unknown, would be helpful. It would show to the student of statistics that this point had been considered and would permit of deductions that would otherwise be unwarranted. Herrick offers suggestions.

TRAUMATIC RUPTURE OF STOMACH

By A. S. Buchanan, Prescott

J. B. J., age 34. Flooring mill laborer. Ate hearty lunch at about 12 o'clock, noon. Returned to work at one o'clock P. M. At about 1:15 a small piece of timber became jammed in a rapidly revolving circular cut-off saw and was violently thrown against the patient, striking him over the epigastrium.

He was not forced off his feet by the impact, but experienced a dull weakening sensation in the abdomen and had to lie down. Immediately a copius perspiration came over him and when first examined, pulse was 110 and thready, and all symptoms of surgical shock were present. There was no sign of an injury to the abdominal wall. The abdomen generally was held rigid, but was not boardlike, and the patient sat up to remove a tight garment. There was no dullness in the flanks.

Liver dullness was present, and there was no hyperesthesia to pin reflex. Patient complained of some pain in lower abdomen which radiated to testicles. Urine was clear and normal in appearance. I decided to wait for further signs; after about five hours pulse was 120 and distinct signs of tympanites and the leucocyte count was 15,300.

He was therefore, given a general anesthetic and the abdomen was opened. On entering the abdomen, by a right rectus incision, the first thing to come into view was found to be cabbage and buttermilk (which was eaten for lunch). The stomach was found to have a ragged slit, which would easily admit three fingers, along the anterior surface and near the greater curvature in the pyloric end of the stomach. There were no signs of any ulcer present, nor were there any indications of any other injury to other viscus. The laceration was repaired by sewing the mucus coat with plain catgut with a second row of stitches of the peritonia coat, using No. 1 ten day chromic. A peritoneal toilet was performed and a drainage tube was placed in the under surface of the liver and another in the abdomen.

The patient had a temperature of 100 degrees the following morning, but subsided at the end of twenty-four hours. Had very little pain and left the hospital the 12th day completely recovered.

Personal and News Items

Dr. and Mrs. P. H. Phillips of Ashdown visited in Little Rock this month.

Dr. George Hughes of Siloam Springs visited in Little Rock last month.

Dr. O. H. King of Hot Springs is the new president of the local Kiwanis Club. Drs. Tribble, Proctor and Sullivan are on the board of governors.

Dr. D. A. Rhinehart of Little Rock attended the meeting of the Radiological Society of North America, which was held in Los Angeles, December 1-5.

We regret to announce the death of Dr. Erton Poynor of Stillwell, Oklahoma, brother of Dr. W. H. Poynor of Harrison. Dr. Poynor died in Louisville, Kentucky, while attending the meeting of the Southern Medical Association last month.

More than forty physicians attended the meeting of the Ninth Counsilor District held November 4, at the Hotel Seville, Harrison. Among the Little Rock physicians on the program included Drs. Kirby, Hinkle and Parmley.

A sectional meeting of the American College of Surgeons for members in Arkansas, Oklahoma, and Texas will be held in Little Rock, January 9-10. Dr. W. F. Smith is chairman of the Committee on Arrangements; Dr. H. Fay H. Jones is secretary of the local committee and Dr. Dewell Gann, Jr., will have charge of publicity.

Pulaski County Medical Society elected the following officers for 1931: Dr. J. H. Sanderlin, President; Dr. J. A. Summers, Vice-President; Dr. Earle H. White, Secretary and Dr. Wm. R. Bathurst, Treasurer.

Dr. D. W. Goldstein of Fort Smith presented a paper on the Tragedies of Dermatology, before the Pulaski County Medical Society, November 17.

Arkansas physicians who attended the Southern Medical Association, November 12-14, at Louisville include:

Wm. R. Bathurst, Gordon Hastings, Louis R. Brown, Wm. E. Jones, M. J. Kilbury, Oliver C. Melson, Madeline M. Melson, D. A. Rhinehart, Harvey S. Thatcher, and H. E. Von Haam of Little Rock; W. V. Laws, Geo. B. Fletcher, and H. King Wade of Hot Springs; E. L. Beck of Texarkana; J. P. Slater of El Dorado; J. E. McGuire of Piggot; John T. Hunn of Harrisburg.

At the meeting of the State Medical Board held in Little Rock, November 11, 1930, the license of Dr. W. W. Hornsby of North Little Rock was revoked on the grounds that he had been convicted of Narcotic Violation.

The license of Abraham M. Goldstandt, which had been issued upon reciprocity from Ohio was revoked on the grounds that the Credentials upon which this certificate was issued had been revoked in Ohio.

The following license have been issued by reciprocity since the last report.

1. Roy E. Speidel, from Missouri.
2. S. Allen Collom, Jr., from Tennessee.
3. Newton A. Seehorn, from Missouri.
4. Gordon Hastings, from Virginia.
5. Harry H. Preston, from Louisiana.
6. Malcom C. Johnson, from Illinois.
7. James R. Williams, from Missouri.
8. Harry O. Lynch, from Louisiana.
9. Morgan I. Nederhiser, from Iowa.
10. Junius B. Futrell, from Tennessee.
11. Chas. R. Townsend, from Kansas.
12. Cecil Riggall, from Louisiana.
13. Guy A. Caldwell, from Mississippi.

LOOKING AT LOUISVILLE

By O. C. Melson, M. D., Little Rock

Whatever else Louisville is famous for we must add to the list the Southern Medical Convention, November 11 to 14th. There were four days of concentrated medical information, interspersed with a little trap shooting, golf and other entertainments.

It is impossible at a meeting of the magnitude of the Southern Medical for one man to hear all the papers. First two days were given over to general clinical sessions, all of which were held in the main auditorium of the Columbia Auditorium. The next two days comprised a section meeting, and in order to hear some of the interesting papers one needed seven-league boots, and a dual personality.

Doctor John J. Moren, of Louisville, presented some cases illustrating post-encephalitic phenomena, Parkinsonian type. The high points which he stressed were the resemblance of these cases to the paralysis agitans so familiar to all practitioners; the preceding history of an acute infection simulating an attack of influenza; and the use of stramonium, grains 1-2, twice a day for the rigidity and hyoscin for the tremor. After a five minute intermission, Doctor William E. Gardner, of Louisville, demonstrated a case of Jamaica Ginger paralysis. In his discussion he brought out what the paralysis was due to. It is tri-ortho-cresol phosphate. The paralysis is similar to a multiple neuritis, and the history of inhibition of a solution of Jamaica Ginger is necessary in making a diagnosis.

Another interesting and instructive presentation in this series of "home town" clinics was that by Doctor J. D. Allen on the Schilling differential blood count. This is of especial value to the clinician in the diagnosis and prognosis of pyogenic infections. While the technique is a little complicated, nevertheless the assistance which the count renders amply justifies the trouble. It should be instituted in every laboratory.

These were just a few of the clinics held on November 11th, and in spite of competition by the American Legion parade they held the interest of all those present.

The second day, twenty-five minute papers were given in the various branches of medical science by experts. On this day, the president-elect of the American Medical Association, E. Starr Judd, told of the historical development of biliary surgery. He began at the time of Galen and brought it up to the present day. Nutritional research in the south was the subject of Roe Remington of Charleston, South Carolina. Under this head he described work being done in his laboratory on the mineral content of food. Among other points of interest he showed the iodin con-

tent of foods in different parts of South Carolina, and their relationship to endemic goitre. Doctor J. H. Musser of New Orleans gave a clinic on the blood in disease, with illustrative cases, especially of the anemias.

After these two days of concentrated medicine, the section meetings began and the conventioner developed a hop, skip, and jump. In medicine, the visiting essayist was C. C. Sturgis of Ann Harbor, Michigan. He presented his studies on the treatment of pernicious anemia. It was of a historical nature and showed how the idea that desiccated pig stomach might be of value in the treatment of primary anemia originated. He also showed the results obtained by its clinical use. Doctor Kinsella, of Saint Louis, showed in a paper how salicylates acted in rheumatic fever. It was his opinion that they decreased swelling and heat through some type of allergic phenomenon. He discounted the probable antiseptic action of the salicylates.

Jumping from medicine to pediatrics we heard a paper by Fritz B. Talbot of Boston, on childhood endocrine disturbances. In addition to being a fluent speaker, Doctor Talbot had a wonderful collection of pictures illustrating the various types of endocrine dyscrasia. Doctor Balycat's movies of allergic manifestations in children showed a considerable ingenuity as well as photographic skill.

The section on neurology and psychiatry had a number of interesting titles. The contents of the discussion, however, will have to be digested by this conventioner in the Journal of the Southern Medical Association, for the simple reason that he could not be in two places at once.

In the section on radiology, Doctor D. A. Rhinehart presented an interesting study on gas and air in the soft tissues. I believe he had diagnosed eleven cases of gas infection by x-ray alone. The guest speaker in this section, Bransford Lewis of Saint Louis, showed the results of the use of uroselectan in pyelography. This excited considerable discussion by the section.

In the section on bone and joint surgery, Doctor H. S. Hench gave the indications and possible results from the treatment of chronic infectious arthritis by sympathetic ganglionectomy and ramisectomy. While the operation is still young there is a small percentage of patients who have received complete relief. It is hoped, as the type of cases upon which it is used becomes more select, that it will be a useful adjunct in the treatment of arthritis.

While the program was chiefly concerned with medical papers those who wished to weather the rain and soggy turf played golf. From all reports it was great sport. Others waited for the traps to be sprung. Another great sport. Lastly, but not by any means the least, must be mentioned Green River, Old Hickory and other well known brands.

It was a great convention. Those who missed it should anticipate attending the next one; those who attended will have many happy memories.

REPORT OF WOMAN'S AUXILIARY TO THE SOUTHERN MEDICAL ASSOCIATION AT LOUISVILLE, KY., NOVEMBER 11, 1930

By Mrs. M. J. Kilbury, Little Rock

The first assembling of delegates and visitors was an informal tea held Monday afternoon, November 10, at the Woman's City Club. This affair was marked by cordiality of the hosts. Many old friends were met and many new acquaintances were made. A Grand Ball and President's Reception was given that night with several hundred in attendance. This was a very brilliant party and showed that the Louisville hosts has spared neither time nor expense in planning for the visitors entertainment.

Tuesday morning the Woman's Auxiliary session opened officially with Mrs. J. Newton Brawner of Atlanta, Ga., presiding. All officers were introduced. Then the roll call of delegates from the different States was heard. There were three present from Arkansas. After an interesting business meeting a luncheon was held in the Crystal Ball Room of the Brown Hotel. At that time a nationally known speaker was heard and a very elaborate luncheon was served to probably five hundred. In the afternoon the reports from the States were read. Arkansas' report compared very favorably with the other reports. The slate from the nominating committee was then asked to be read. It was unanimously adopted. The following officers were elected:

Mrs. F. A. Collom, Texarkana, Tex., President.

Mrs. Chas. E. Oates, Little Rock, Ark., President-Elect.

Mrs. Geo. A. Hendon, Louisville, First Vice-President.

Mrs. Milton C. Lewis, Nashville, Tenn., Second Vice-President.

Mrs. Walter S. Swann, Huntington, W. Va., Recording Secretary.

Mrs. F. Allen Collom, Jr., Texarkana, Tex., Corresponding Secretary.

Mrs. Southgate Leigh, Norfork, Va., Treasurer.

Mrs. Edward Jelks, Jacksonville, Fla., Parliamentarian.

Mrs. A. Street, Vicksburg, Miss., Historian.

These officers were installed and then followed adjournment, the next meeting to be held in New Orleans, La.

The entertainment committee were not yet satisfied, however, so continued with their hospitality by giving a most elaborate dinner and musicale Thursday night at the Pendennis Club, the most luxurious men's club in the south. Friday, the visitors were taken by motor to visit the "Old Kentucky Home," a very interesting place. Saturday, a motorcade left Louisville for Frankfort, Ky., for the unveiling of the monument to Dr. Ephriam McDowell.

Because of the cordiality, hospitality and attention we had received during the entire time, we left with a feeling of great appreciation and friendliness for our Louisville hosts and the State of Kentucky.

THE STATE PLAN FOR REHABILITATION AND EDUCATION OF CRIPPLED CHILDREN

As Supervised by the Arkansas Crippled Children's Commission

By Mrs. J. S. Jenkins, Pine Bluff

After careful study by the Arkansas Society for Crippled Children relating to the crippled child problem in Arkansas, a practical and economical plan looking towards the greatest good for the greatest number of crippled children in the State was formulated. This plan was presented to the Legislature in 1929 for the State's approval and adoption.

When the State was asked to take the leading role in an attempt to solve the problem of the crippled child, it did so not entirely from a humanitarian standpoint, but rather as a practical and economic problem for the State to solve. The crippled child with its warped and twisted body has a strong heart appeal, but is not an emotional problem to be solved by sympathy alone. It is a complicated and highly technical one requiring specialized services in the fields of professional, hospital, educational, social service, health, pre-vocational and vocational guidance and follow-up. Not one of these without the other, but all together as a whole. It is one which may be solved only by intelligent ways and means of locating, caring for, educating and training such persons.

When the State assumed this responsibility it set up a plan or program which makes available to those handicapped wherever they may live, the highest type of service which may be provided locally, but supervised by the State. It is a plan which provides that parents and guardians do all in their power to care for the physically handicapped children for whom they are responsible, yet it recognizes that there are hundreds of children whose parents are not "indigent," but who nevertheless cannot bear the expense of long drawn out orthopedic treatment and its consequent hospital and transportation costs. An official State department, State body, or the "machinery" so to speak was created to supervise and carry out this plan. This department is the State Crippled Children's Commission.

The State's plan is simple, yet adequate and economical. It is practicable and workable and one that insures relief and education to every crippled person in and near their own homes and brings both quantity and quality of service in every part of the State, as well as safeguarding the expenditure of public funds.

Now, this plan is concerned only with those whose handicaps are solely physical, or according to Section 3 of Act 356 of the 1929 Legislature, "all physically handicapped persons from infancy to twenty-one years of age who by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury or disease and who is or may be expected to become totally or partially incapacitated in respect to securing an education or remunerative employment."

It is a plan which will bring to such persons adequate care and education as quickly as possible after the onset of crippling conditions as is practical and proper by a complete follow-up service. To many who have so long believed that the only way crippled children may receive attention is to place them in institutions especially built, equipped and operated for them this modern plan adopted by Arkansas may seem in direct contrast, but it is a contrast which when fully understood will prove quite as popular.

The State plan does not include, neither does it contemplate building or maintaining State institutions for crippled children. State institutions are not necessary and would involve an unnecessary outlay of public funds while accomplishing only a minimum amount of good. The plan already set up is one of decentralization which will save the State the expense of maintaining centralized institutions.

By using all available existing facilities the greatest number of children may be cared for close to their own homes as possible at least expense. As the child's welfare is the one objective. The benefits of a decentralize system in the solution of the crippled child problem are evident. Communities become inspired to develop their own available facilities so that every child may be given the advantage of individual attention as needed. This is conducive to the happiness of the children and their parents, besides saving large sums of money otherwise necessary for transportation and overhead expense. It is practical because it brings relief to all instead of to the privileged few and with least expense. This plan appeals to statesmen because while it deals with politics, it prevents the child from becoming political issues and it safeguards the expenditure of public funds.

It is a plan which places the State in a position to know the causes of dependency, whether or not it is increasing or decreasing each year and to estimate the cost to the State, and it provides the ways and means of preventing as far as possible social liabilities.

The State Crippled Children's Commission has certain definite and specified duties and State authority to make them operative. It is important and necessary for the State to have an intelligent and expeditious way to locate handicapped persons, so, first, the Commission is empowered to arrange for and supervise surveys for this purpose and has the authority to make these arrangements with all local and lawful authorities such as local boards of education and health, social service and any voluntary agency or agencies it may designate to render this special service. Second, it is empowered and has the State authority to arrange for diagnostic clinics where and when it may deem necessary. Diagnosis by properly qualified experts is of vital importance and must be made available as close to the homes of the children as possible.

Third, the Commission is empowered and has the authority to provide treatment, braces, etc., and to arrange and contract with any approved hospital, convalescent hospital and school for attention and education.

It has the authority to plan with the State superintendent of Public Instruction to secure an annual enumeration of crippled children and to work with local boards of education for proper tuition for crippled children from their respective jurisdiction who may attend special classes in connection with city and county schools and in hospitals for bedside instruction.

Through the Commission, the local quorum courts and the local boards of education are authorized to provide care and treatment and to educate respectively, the physically handicapped children under twenty-one years of age when they are unable in whole or in part to do so. Because crippling conditions cause mental complexes, it is necessary to think of this new type of mental training and of special classes in the public schools, home teaching, and bedside teaching in hospitals and convalescent hospitals.

Forty-eight States have programs for cripples. Out of the forty-eight, twenty-eight have a decentralized system of using all existing facilities. Arkansas is one of these.

Ten States have State authority for making surveys. Arkansas is one of these.

Seventeen States have State authority to conduct clinics. Arkansas is one of these.

Thirteen States have Crippled Children's Commissions. (All States do not have Commission form of Government.)

Twenty-two States have annual enumeration of cripples by school census.

Thirteen States have special education.

Five States have compulsory education.

Six States have birth registration of crippled children.

Forty-three States have Federal rehabilitation for crippled adults.

Eighteen States have Federal and State Rehabilitation for crippled adults. Arkansas is one of these.

Eighteen States have Federal and State rehabilitation cooperating for crippled children.

Only ten States have centralized plans or programs.

Five centralize in University Hospitals there care and education.

Only five State centralize care and education in State hospitals.

Only one State uses private institutions.

Arkansas' plan of decentralization is a forward going one in the march of progress as shown by these statistics gathered from other States. The decentralized plan is one of economic good for it reaches every child in need of attention and provides the needs. It is not a plan regarded as an philantropic and emotional project, but as a justifiable effort and investment by the State in its undeveloped human assets.

The crippled child problem is a solvable one and there is a place for every altruistic and charitable agency to work with the State to see that every crippled child of today and who will become the crippled adult of tomorrow shall be given an opportunity for normal living, ultimately becoming self-supporting citizens and contributors to community life. No funds were appropriated by the Legislature to make the State's plan operative, but the Arkansas Society for Crippled Children placed its limited resources and finances at the disposal of the State, so that a part of the program might be carried on at the present time.

RESOLUTIONS

The Columbia County Medical Society In Session

Whereas, We have men in Columbia County Arkansas who are not physicians or surgeons, but are members of a certain sect or cult, who pose as safe advisors and miraculous healers of the sick and maimed, by some secret method of their own which is unknown to and unrevealed by American standard text books on medicine and surgery, men who cannot register, prescribe or practice, as physicians or surgeons, because they have not taken the courses of study prescribed by the faculty of any chartered medical college authorized by law to operate, men who are not required to take medical examinations before the State medical examining board, because they are not recognized as physicians or surgeons, men who denounce medicine and surgery as a farce and a fake and are grossly ignorant of both, and

Whereas, Some people prefer to patronize and do patronize men of this sect or creed, and risk the health and lives of their families to the judgment of non-medical men, rather than patronize men who have graduated in the science of medicine, and

Whereas, It is alleged that physicians and surgeons are prejudiced against such sects and creeds and the people who patronize them, and

Whereas, Physicians are sometimes asked to consult with these unethical practitioners and to cooperate with them in treating patients, and

Whereas, The physicians of Columbia County hold in high esteem the ethics of their profession and do not want to cause discord among themselves or to bring reproach upon themselves that would justify criticism from the entire medical profession, and

Whereas, The medical profession of Columbia County does not want any of its members to hinder the most pleasant relationships from existing between miraculous healers and the people who prefer their services, therefore be it

Resolved, First, that the dignity of the medical profession does not and will not permit any professional affiliation between its members and the members of any sect, cult or creed that bears a lower rating than that of "honorable physicians and surgeons."

Resolved, Second, that the medical profession heartily accords to people the right of choice, to choose whom they may for their health advisor and healer.

Resolved, Third, that on and after the first day of December, 1930, the medical profession of Columbia County will not permit any of its members to interfere, in any way, with the choice any person has made, of any representative of any sect or cult to do practice for him or her if such choice be made on or after the first day of December, 1930, either by practicing medicine or surgery for such person or by giving advice or by making suggestions about medicine or disease which could possibly cause friction between such person and the man chosen.

C. T. McWilliams, M. D., Pres.
W. H. Horn, M. D., Sec.-Treas.

WANTED — Capable young surgeon, pathologist wants connection or location. Will consider general practice. Address: A. P., care of Journal, Arkansas Medical Society, 814 Boyle Building, Little Rock.

Auxiliary Notes

Pulaski County

The Woman's Auxiliary to the Pulaski County Medical Society met Nov. 12, with Mrs. Pat Murphey at her home in Lenon Place. Assistant hostesses were Mrs. T. M. Fly, Mrs. C. W. Garrison and Mrs. Homer Scott.

Mrs. Anderson Watkins, president, presided over the business session when a report was given by Mrs. William R. Bathurst of the Detroit meeting of the Auxiliary to the American Medical Association.

Mrs. A. R. Stover gave an interesting report of the city federation luncheon, held at the Woman's City Club, October 28. Mrs. C. E. Oates, president-elect of the Southern Medical Association, gave a detailed report of the convention of the Arkansas Federation Women's Clubs held recently at Fort Smith. A report was also given by Mrs. M. J. Kilbury on the meeting of the Auxiliary to the Southern Medical Association. Attention was called to the recent group meeting at Mrs. Kilbury's home for the making and assembling of obstetrical kits. Those who attended the meeting from surrounding counties were Mrs. T. G. Porter, former president of the State Auxiliary, Mrs. T. O. Benton, Mrs. J. M. Muse, Mrs. J. W. Westerfield, Mrs. H. E. Cureton and Mrs. Marcus Smith. About forty members were present. Following the business session, a clever playlet, "A Parliamentary Dilemma," was presented. Later, delicious refreshments were served by the hostess. The serving table was covered with a handsome lace cloth and centered with a bowl of yellow chrysanthemums, surrounded by yellow tapers in silver holders. The next meeting of the auxiliary will be held December 10, with Mrs. R. E. Pryor as hostess.

Saline County

The Auxiliary to the Saline County Medical Society met at the home of Mrs. T. E. Buffington, October 15. Plans for the year's work were discussed. All the members were very enthusiastic and this promises to be a very interesting year. Most of their work will be to help the unfortunate families in the community.

Bowie and Miller Counties

The Auxiliary entertained their husbands with a banquet at the Hotel McCartney the night of November 6. This is an annual event and is always well attended. The program this year was very cleverly worked out by Mrs. L. J. Kosminsky and was in the form of a Radio Broadcast. Each year more interest is shown in this annual meeting.

Sebastian County

The first meeting of the 1931 season was held November 10, at the home of Mrs. E. C. Moulton. Thirteen members were present. Mrs. H. H. Smith, President, gave the members questionaires to be filled out for the State Society records. Routine business was attended to and two new members received. It was decided to hold social meetings every three months, but to hold the organization in readiness for any emergency which might occur.

Faulkner County

Mrs. J. W. DeJarnett was hostess to the Woman's Auxiliary of the Faulkner County Medical Society for its regular meeting at her home on College Avenue Thursday afternoon. At the business session, Mrs. J. M. Muse was elected historian of the organization and literature sent out by the State Board of Health was given out for distribution. Mrs. H. C. Brooke read a paper on "Diet and Dental Hygiene" and Mrs. I. N. McCollum read a paper on "The New Method in the Control of Measles." At the social hour the hostess served dainty refreshments.

Obituary

MILLER, C. S.—Dr. C. S. Miller of Hot Springs, died July 23, 1930. Dr. Miller's death was caused by a cerebral hemorrhage.

County Societies

ARKANSAS COUNTY

(Reported by E. B. Swindler, Sec.)

The Arkansas County Medical Society convened at the Riceland Hotel, Stuttgart, for its regular meeting, November 11.

The program was provided by S. A. Drennen, and consisted of the following:

"Care of the Urinary Bladder in Surgical and Obstetrical Cases," by Sterling Bond, Little Rock.

"Convergent Type Strablismus," by K. W. Cosgrove, Little Rock.

Members present: Drennen, Fowler, Lowe, Neighbors, John, Whitehead and Swindler. Visitors: Geo. Jackson, Sterling Bond, and K. W. Cosgrove, Little Rock; F. A. Poe, Gillette; John Wilson, Ulm; A. B. Jemison.

CRAWFORD COUNTY

(Reported by Odell J. Kirksey, Sec.)

The Crawford County Medical Society met December 1, in Van Buren.

Members present: Dibrell, Reeves, Stewart, Bennett, Grant and Kirksey. Visitors: A. A. Blair, D. W. Goldstein and Fred H. Krock, all of Fort Smith.

Dr. Blair read a very interesting paper on Sodium Amytal in surgery and Dr. Krock presented a report on two cases of brain abscess, involving the frontal lobe.

The society adjourned until the fourth Thursday in January, 1931.

CONWAY COUNTY

(Reported by A. L. Goatcher, Sec.)

The Conway County Medical Society met in regular session at the office of the County Health Unit, November 20, 1930.

The following officers were elected for the ensuing year: President, W. H. Bruce, Morrilton (re-elected); Vice-President, H. E. Mobley, Morrilton (re-elected); Secretary-Treasurer, A. L. Goatcher, Plumerville (re-elected). Delegate to the meeting of the State Society, E. L. Matthews, Morrilton; Alternate, H. E. Mobley, Morrilton.

CRAIGHEAD-POINSETT COUNTIES

(Reported by Thad Cothern, Sec.)

The Craighead-Poinsett Medical Society held its final meeting for the year 1930, December 4, in the banquet hall over Link's Cafe. The attendance was large, the program good, which made the meeting very pleasant and instructive.

Among those present were: Baird and Reagan, Marked Tree; Bates, Lake City; McDaniel and Moreland, Tyronza; McCurry, Cash; Lamb and Majors, Paragould; Myers, Black Oak; Hunn, Harrisburg; O. V. Smith, Bay; Altman, Cothern, C. B. Finch, Chas. H. Lutterloh, P. W. Lutterloh, Jernigan, McAdams, Sloan, Stroud and Willett, Jonesboro.

A symposium on Tuberculosis was the feature of the meeting and some very able papers were read. Dr. Stroud presented one on Pulmonary Tuberculosis; Dr. Chas. H. Lutterloh, the Genito-urinary type; Dr. Jernigan, the Lymphatic type; Dr. Bates, the Skin Lesions; Dr. McAdams, Tuberculosis of the Bone, and Dr. McCurry, the Ecbatics of Tuberculosis. Each paper was well worth the evening's attendance.

A patient for clinical study was referred by Drs. Haltom and Finch.

Dr. W. M. Majors of Paragould, Vice-President of the Tri-State Medical Association, made a short talk, telling some of the good things the program committee had in store for the next meeting of the Tri-States Association, which convenes at Memphis, in February.

The next order of business was the election of officers for the coming year, which resulted as follows:

President, Ralph Sloan, Jonesboro; First Vice-President, W. H. Moreland, Tyronza; Second Vice-President, Chas. Bates, Lake City; Secretary, H. A. Stroud, Jonesboro; Treasurer, R. M. Jernigan, Jonesboro; Censors, R. H. Willett, Jonesboro, one year; E. C. McDaniel, Tyronza, two years; J. T. Hunn, Harrisburg, three years.

The hour being late when the election of officers was completed, the motion to adjourn was carried.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in regular session in Blytheville, December 9, 1930.

Present: Wilson, Fox, McDaniel, Grimmett, Sheddan, Tipton, Hutchens, Morris, Washburn, Husband, I. R. Johnson, Ellis, Harwell, Barrett, Hudson and Smith.

The Secretary gave a synopsis of the work of the Society during the past year.

A resolution was introduced and unanimously adopted, asking the County Judge-elect to appoint F. D. Smith County Health Officer for the next term.

The following officers were elected for 1931:

President, Paul L. Tipton, Blytheville.

Vice President, V. R. Fox, Manila.

Secretary-Treasurer, F. D. Smith (Re-elected), Blytheville.

Censor, W. P. Hutchens, Manila.

Delegate, A. M. Washburn, Blytheville.

Alternate-Delegate, C. M. Harwell, Osceola.

Manila was selected as the next meeting place.

After adjournment luncheon was served with the compliments of Dr. F. A. Robinson of Blytheville.

OUACHITA COUNTY

(Reported by R. B. Robins, Sec.)

The Ouachita County Medical Society was the guest of Dr. and Mrs. J. S. Rinehart for dinner at their home in Camden, Thursday night, December 4, 1930. Present: Sam Thompson, Norf Partee, J. B. Jameson, J. S. Rinehart, S. D. McGill, B. V. Powell, R. B. Robins, C. S. Early, R. C. Kennerly, W. B. Woolridge, J. P. Clemens, and G. P. Sanders.

A delicious turkey dinner was served, after which a motion picture program was given, consisting of the following pictures: The Anatomy of the Abdominal Wall; The Anatomy of the Abdominal Viscera; Colles' Fracture and Traumatic Injuries of the Extremities.

An abstract of current literature was given by Dr. Sam Thompson.

The next meeting will be held at the Camden Country Club in February and will be Ladies' Night.

OUACHITA COUNTY

(Reported by R. B. Robins, Sec.)

The Ouachita County Medical Society met in regular monthly session, Thursday evening, November 6, in the parlors of the Ouachita Hotel in Camden. A banquet and musical program preceded the scientific program.

The scientific program was as follows:

"Obstetrical Anesthesia," by S. B. Hinkle, Little Rock.

"Injuries of the Forearm and Wrist," with lantern slide demonstration, by D. A. Rhinehart, Little Rock.

"Abstract of Articles of Practical Interest in Recent Issues of the Journal of the American Medical Association," by G. F. Hollingsworth, Hampton.

There were twenty-three physicians present.

The next regular meeting will be held December 4, at Camden.

Book Reviews

Physiology and Biochemistry in Modern Medicine. By J. J. R. Macleod, M. D., LL. D., D. Sc., F. R. S., Regius Professor of Physiology in the University of Aberdeen, Scotland. Assisted by Roy G. Pearce, A. C. Redfield, N. B. Taylor, and J. M. D. Olmsted, and by others. Sixth Edition. With 295 illustrations, including nine color plates. Published by the C. V. Mosby Company, St. Louis. 1930. Price, $11.00.

Particular attention is given in this book to the far-reaching applications of this latest department of medical science, in the elucidation of many obscure problems of clinical medicine, such as those of diabetes, nephritis, acidosis, goiter and myxedema.

Obstetrics for Nurses. By Charles B. Reed, M. D., F. A. C. S., Professor of Obstetrics, Northwestern University Medical School; Chief Obstetrician Wesley Memorial Hospital, Chicago, and Charlotte L. Gregory, R. N., B. S., M. D., Adjunct in Obstetrics at Wesley Memorial Hospital. Third Edition. 144 illustrations, including two color plates. Published by the C. V. Mosby Company, St. Louis. Price, $3.00.

This book presents the obstetric ideas and technic which the author has endeavored for years to impress upon his students and nurses. It is an ideal book for class instruction and at the same time complete enough for post-graduate reference.

A Primer for Diabetic Patients. By Russell M. Wilder, M. D., Professor and Chairman of the Department of Medicine, University of Chicago Clinics; formerly Head of the Section on Nutrition, Division of Medicine, Mayo Clinic. Fourth Edition, revised. 138 pages. Published by W. B. Saunders Company, Philadelphia. Cloth, $1.50.

A very important feature of this small volume is the valuable information given as to what diabetes is and what may be expected from treatment.

Infant Nutrition. A Textbook of Infant Feeding for Students and Practitioners of Medicine. By Williams McKim Marriott, B. S., M. D., Professor of Pediatrics, Washington University School of Medicine; Physician in Chief, St. Louis Children's Hospital, St. Louis. Illustrated. Published by the C. V. Mosby Company, St. Louis. Price, $5.50.

It is the author's purpose in presenting this work to give present-day knowledge concerning the nutritional requirements of infants under normal and pathological conditions and to indicate the effects of failure to meet any or all of these requirements. He also stresses the importance of chemical pathology of the body as related to feeding and nutrition.

Minor Surgery. By Arthur E. Hertzler, M. D., Chief Surgeon, Halstead Hospital, and Victor E. Chesky, M. D., Chief Resident Surgeon, Halstead Hospital. Second Edition. With 475 illustrations. Published by the C. V. Mosby Company, St. Louis. Price, $10.00.

The authors have carefully presented in this volume only those things that have been proved in practice. It should be of much valuable aid to the students as well as the practicing physician in his general work.

Abstracts

(Continued from page 147)

may exist even when the quadrad seems normal. Malignant nasopharyngeal tumors are significant for lack of rhinologic symptoms. Salivary calculus will resemble sarcoma or mixed tumor disease. Diathermy will light up and produce progress toward increased deafness in otosclerosis. Sinus thrombosis is comparatively rare, far south. The inferior turbinate is an essential organ on the coast line, and especially far south. The wide nose of the Negro with its large turbinates will mislead the uninitiated. The greater the dilution with the white race, the less is the resistance. Allergic reactions are scarce in real Negroes, who seem less sensitive.

ADDITIONAL LIGHT ON DYSMENORRHEA PROBLEM

Norman F. Miller, Iowa City (Journal A. M. A., December 13, 1930), states that while it is not justifiable to conclude that faulty posture and poor muscle tone cause dysmmenorrhea, a reduction in menstrual pain has occurred along with a decrease in imperfect posture and poor muscle tone as a result of directed physical exercise. Moreover, this occurred during a period when the living regimen could scarcely be considered quieting or conducive to restfulness, and, finally, when the only actively and knowingly applied remedial measure was the required course in physical education and corrective exercises. In the face of these observations, it would seem that the reduction in dysmenorrhea associated with improvement in body mechanics is more than mere coincidence.

TUMORS OF THE EYE AND ADNEXA

E. H. Cary, Dallas, Texas (Journal A. M. A., December 13, 1930), reports twenty-two cases of tumor including teleplasms from mesoblasts, teleplasms derived from neural epiblasts, teleplasms arising in parts, derived from masoblasts, teleplasms derived from cuticular epiblasts, optic nerve tumors, mesoblastic tumors; orbital sarcomas, a xanthosarcoma or liposarcoma, an orbital tumor of the gland type and an orbital cyst. He emphasized the value of injecting an eye specimen with solution of formaldehyde, as it aids materially in the clinician's macroscopic study of the eye without preventing further examination microscopically. The procedure of tying and incising all the branches of the external carotid on each side seems definitely to have delayed the dealth of several of the patients in whom it was used. The starvation method cannot be expected to be of great value when a branch of the ophthalmic artery is aiding in the nourishment of the field. The starvation operation is of no value in a carcinomatous condition, for metastasis takes place through the lymphatics.

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Original Articles

SPINAL ANESTHESIA*

D. E. White, M. D., El Dorado

Spinal Anesthesia is far from being a new subject or a new form of anesthesia as it is about a half century old according to statistics, but it has not been universally used except within recent years. In preparing a paper on this particular subject, due to the fact that this form of anesthesia has been used by me only to a small extent and only during the past few months, I do so with considerable reluctance. However, on the occasions this form of anesthesia has been used by me, practically all of the patients withstood the anesthetic so well and the anesthetic worked so smoothly, that I am quite enthusiastic over spinal anesthesia. There are a good many surgeons over this State now using this form of anesthesia, and some few who have used and discarded it for various reasons, but the majority of surgeons are not using it and perhaps have never used it. Consequently, this paper is written mainly for the purpose of attempting to create an interest in spinal anesthesia by those who have not been accustomed to using it. There is no doubt that this form of anesthesia is rapidly increasing in popularity, and perhaps has enjoyed its greatest wave of popularity so far during the year 1929. It is being used extensively in practically all of the large cities over the United States, as well as the larger European cities. No doubt many of you have read the recent article by Koster and Kasman of Brooklyn, New York, in which they reported the results of spinal anesthesia on a series of 4,500 cases. Rygh and Bessessen have collected from recent literature 250,895 cases in which spinal anesthesia was used with only 75 deaths. At Babcock's Clinic in Philadelphia there have been no deaths in the last 10,000 cases in which spinal anesthesia was used. Among some of our noted surgeons now using this form of anesthesia is John B. Deaver who uses spinal anesthesia in 85 per cent of his cases. Although at the present time this form of anesthesia is being used for operations over the entire body, we have confined our work so far on structures below the diaphragm, and, for this reason, will not undertake to discuss the advisability or safety of operations above the diaphragm. Also, it is now being used extensively in the form of sacral anesthesia, particularly in obstetrics, but we have had no experience whatever with this particular phase.

History

Regarding the history of spinal anesthesia, as is customary in all discoveries of any importance, there is some question as to just who should receive recognition by the world at large as being the first one to use and describe this method of anesthesia. An American, who was a neurologist of New York, Dr. Corning, has claimed priority of this method, offering as evidence that he had been using it since 1885, and that he had published his first report in the New York Medical Journal in the same year under the following title: "Spinal Anesthesia and Local Medication of the Cord." This, you will recall, was long before Quincke's lumbar puncture had been introduced. At this time, Dr. Corning injected the anesthetic only in the neighborhood of the cord with the supposition that the blood vessels in its vicinity would absorb the drug and convey it to the cord. It has been claimed by numerous authorities that his experiments and ideas remained dormant for years and were not practical enough to induce any surgeon to perform an operation under this form

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

of anesthesia. Fourteen years later, or in 1899, a European, Dr. A. Bier, used and described this method, and at the time was unaware of the previous work of Dr. Corning. Dr. Bier claims to be the first to inject the anesthetic directly into the lumbar sac after watching cerebro-spinal fluid escape as positive evidence that the needle had penetrated into the sac. The followers of Bier maintain that the blind injection of the anesthetic as practiced by Corning could never have led to successful results and that it was not regarded as practical until after the work of Dr. Bier was published. Be this as it may, we, as American citizens, cannot refrain from forming the opinion that at least the idea was first conceived and thoroughly described as a possible form of anesthesia by Dr. Corning in 1885. However, after the work of Dr. Bier. this form of anesthesia began to gather a few more followers all along. In this country, as far back as 1901, even head operations, as mastoidectomies and eye enucleations, were reported as being successfully done under spinal by Payne. There was considerable adverse criticism to this method, however, during this time by prominent surgeons, and for the next several years it was practically placed in discard or relegated, only to be again dug out of the rubbish, renovated, and restored to its proper standing with an ever increasing popularity within the past five or six years.

Theoretical Dangers

Spinal anesthesia has been held in abatement all these many years on account of criticism based upon theoretical speculation and not upon actual facts as brought out by scientific experimentation. For example, according to a recent article by Koster and Kasman, it seems the great bugbear of this method of anesthesia is the fear of a respiratory paralysis thought to be due to the action of the drug upon the medullary centers with the theory advanced that the anesthetic ascends by diffusion to the medulla and causes such a depression of the respiratory center that paralysis occurs. Yet these men have definitely proven that the drug does not affect the respiratory center in the least. In order to completely disprove this theory they did considerable experimental work on frogs and guinea pigs. The cervical cord and medulla were exposed, subarachnoid space opened, respirations of frog recorded, and then a cotton pledget saturated with a solution of neocain was placed directly against the medulla and upper cord. This anesthetic was used in much stronger proportions than that used in humans, but still no visible effects on the respiratory movements were apparent. These same experiments on guinea pigs produced the same results, or, in other words, the respiratory movements were not disturbed in the least, although there was present complete anesthesia of the entire body of the guinea pig during this experiment. These men are of the opinion that the deaths so often reported as due to paralysis of the respiratory center in all probability were due to cerebral anemia which occurs as a result of improper technique or faulty position of the patient while on the operating table. Aside from the possible respiratory paralysis as stated above, the other principal objections to this form of anesthesia are cardiac depression and a sudden marked drop in blood pressure. Neither of these happen very often, and in case of the sudden drop in blood pressure, this can be readily overcome by an ordinary dose of adrenalin chloride given hypodermatically, or, in extreme cases, it may be given intravenously along with saline solution. As a matter of fact in case ephedrine is used just preceding the injection of the anesthetic as a routine procedure, then there will seldom be any appreciable blood pressure change, as this drug, having a more lasting effect than adrenalin, seems to have a very definite stabilizing effect on the blood pressure. Dr. Pitkin has said that ephedrine has possibly contributed as much to the safety of spinal anesthesia as did adrenalin to the success of local anesthesia.

Advantages Over General Anesthesia

The simplicity of the method used to induce spinal anesthesia may be considered as one definite advantage over general anesthesia. Anyone who is capable of doing a simple spinal puncture can very easily induce spinal anesthesia. A general anesthetic is contraindicated in all acute respiratory conditions, but spinal anesthesia will not in any manner interfere with such conditions. Spinal anesthesia prevents operative shock. Under spinal anesthesia even at the beginning there is no struggling of the patient as there is a total freedom from pain and in addition the abdominal wall is completely relaxed. In cases of intestinal obstruction this form of anesthesia is far superior to inhalation narcosis, for, under spinal, the intestines are not distended and do not continually annoy the operator by protruding from the wound. In addition, in-

testinal paresis is not so likely to occur. Spinal anesthesia is more satisfactory than general in cases of advanced cardiac diseases, advanced pulmonary diseases, arterial hypertension and renal diseases. It is far better to use spinal anesthesia in senile, debilitated or cachectic patients. It does not have the bad effects on various important organs that might be damaged by general anesthetics. Post-operative pneumonias, post-operative nausea and vomiting and other post-operative conditions often following general anesthetics do not have to be feared when spinal anesthesia is used. As a matter of fact it is a much better form of anesthesia than even the usual local anesthesias as the anatomical relationship is not disturbed by local distortion of the tissues, tissue irritation and traumatism due to copious infiltration is avoided, and as a rule it is more simple and more rapid than the various local anesthetics.

Contra-indications

Spinal anesthesia is contra-indicated in cases of severe shock of any nature, but not any more so than general anesthesia. It should not be used in cases where the systolic blood pressure is less than 100. It should not be used on cases that are highly nervous and sensitive, and who prefer to have a general anesthetic, particularly if there is no contra-indication to the latter. It should not be used unless there is present a well qualified man, often spoken of as the psycho-anesthetist, at the head of the table to be constantly on guard as to the patient's condition. It should not be used in cases of suspected brain tumors, in cerebro-spinal syphilis, or in epileptics. Its use in cases of strangulated hernias has been considered as possibly harmful due to the fact that the action of the anesthetic on the bowel just above the constriction might favor perforation at this point. Also, its use is questionable in cases of intestinal perforations and in general peritonitis.

Variety of Cases

Among the different kinds of operations that have been performed by us under this form of anesthesia within the past few months are numerous appendectomies, several herniotomies, one thigh amputation, two hysterectomies, one intestinal resection case, one cholecystectomy, one cesarean section, and considerable gynecological work such as uterine suspensions, salpingectomies, oophorectomies, and perineorrhaphies. Of this series there are several that deserve particular citation. Regarding the herniotomies, in one case, that of a bilateral inguinal hernia, both hernias were repaired in the usual manner and the appendix was removed through the right hernia incision. The time required for the entire operation was one hour and five minutes, and while closing the wound on the second hernia the anesthetic began to play out. Consequently, we used a small amount of novocaine solution locally, although the chances are that the wound could have been completely closed without causing very much actual pain, if any, to the patient. Regarding the intestinal resection case, this was performed on account of a complete obstruction associated with a gangrenous condition of about fourteen inches of small intestine. The time required for this operation was one hour and forty-five minutes, and also, in this case, after we had finished the operative work and were closing it became necessary to use a small amount of gas-oxygen by inhalation in order to complete the closure. Three days after this operation, this patient died, being the only fatal case so far in the above series. Instead of considering that this form of anesthesia had anything to do with her death, we believe that the patient would probably have died on the table under a general anesthetic as she was a very poor operative risk at the time of her operation. The case in which one of the hysterectomies was done was quite a severe test on spinal anesthesia, but it stood the test well, and after one hour and thirty-five minutes had elapsed when the last stitch was taken, the anesthesia was still perfect. This was a case of multiple Fibro-myomata Uteri with the fibroids extending above the umbilicus, associated with a large pus tube riding high on the left side, and the patient only a fair operative risk. The operation was tedious and difficult but the patient never once complained of any pain throughout the entire ordeal, and at the time she was returned to her room we think she was in much better condition generally than she would have been had the operation been performed under general anesthesia. Regarding the cholecystectomy which was performed on account of the presence of gall stones, the only thing unusual about this was that for some reason which we did not understand the anesthetic did not take affect until after about thirty minutes had elapsed, and eventually we made the skin incision after giving the patient a few breaths of ethylene. However, the patient was permitted to come out imme-

diately after the skin incision, and from that time on throughout the entire operation the anesthetic worked perfectly, even lasting on through a second operation, that of an appendectomy performed through the usual McBurney incision, the entire double operation requiring one hour and forty minutes.

Technique

The technique as used by us within the past few months has been to give the patient a hypodermic of morphine and hyoscine forty-five minutes prior to the operation and have the case prepared as for any other surgical procedure. If the patient seems to be nervous and apprehensive upon being brought to the operating room, we do not hesitate to give another narcotic. The blood pressure is taken and recorded before the anesthetic is injected, following which blood pressure changes are recorded all during the operation. The patient is placed on either one side or the other as is most convenient to the operator and is most conducive to the reception of good light, and encouraged to bow his back as much as possible by flexing his knees upon his abdomen and bending his head forward. His back is prepared in the same manner as is customary in preparing the abdomen immediately preceding a laparotomy, using iodine over a wide area and removing same with alcohol. The contents of a 1cc. ampule of ephedrin-novocaine solution, containing 5 per cent solution of ephedrine and 1 per cent solution of novocaine, is now injected over the proposed site of puncture, which in all of our cases has been at a point between the second and third lumbar vertebrae. Next, the spinal needle, a needle of 20 or 22-gauge, is directed straight into the subarachnoid space, and a few drops of clear spinal fluid are allowed to escape before the anesthetic solution is injected. We have used nothing but spinocaine in our work and have attempted to use this according to the method as advocated by Dr. Pitkin, except that we have used more of the anesthetic as a routine than suggested by the latter. Regardless of this fact, we have had one case in which it required thirty minutes for the anesthetic to take affect, and two cases in which the anesthetic began to play out just before the completion of the operation, although both of these operations lasted over one hour. In every case, we have been using 4 cc. of spinocaine and admixing it in the syringe with the spinal fluid, according to the height of anesthesia desired, before the injection is completed. Immediately following the injection of spinocaine the patient is placed in a moderate Trendelenburg position and maintained in this position throughout the operation. With the exception of the gall bladder case as mentioned above, the usual time required for the anesthetic to take affect depending on the height of anesthesia desired was from five to fifteen minutes, with an average of eight to ten minutes for operations below the umbilicus. The anesthetic used by us usually lasts from forty-five minutes to one and one-half hours, with an average of about one hour. In case of a sudden drop of blood pressure a hypodermic of ten minims of adrenalin chloride is given immediately.

Conclusions

In our opinion, the possibilities of this form of anesthesia are unlimited, and we believe that from now on its popularity will rapidly increase. Spinal anesthesia under good careful technique can be used with safety to the patient in practically all operations below the diaphragm. If spinal anesthesia is of value in patients considered as poor operative risks, it seems as though it would be of still more value in favorable cases. In recent literature it has repeatedly been predicted that this form of anesthesia will be the universal anesthetic of choice within the next eight or ten years.

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DISCUSSION

DR. M. D. OGDEN, Little Rock: I saw my first spinal anesthetic in 1900—thirty years ago—and cocaine was the drug used. I have used spinal anesthesia off and on for varying periods ever since and in the last couple of years have increased its use considerably. Regarding what Dr. White said about spinocaine, Pitkin's solution, I have used this in perhaps twenty-five or thirty cases and have now abandoned it as I cannot obtain the results that Pitkin claims. The results in my hands have been uncertain and the dose is large. The doctor mentioned 2 cc. of spinocaine, which means 400 mg. of novocaine, an unnecessarily large dose, although Pitkin claims that its slow diffusibility obviates toxic symptoms. This I doubt.

The most important point in spinal anesthesia is the Trendelenburg position, as this makes this form of anesthesia safe. Dr. White mentioned, as one of the contra-indications, a systolic blood pressure of 80 or 90. Spinal anesthesia is safe with a pressure as low as 60 or lower, if the Trendelenburg position is used. The solution ascends in the spinal canal and when it reaches the eleventh or twelfth dorsal vertebra, it paralyzes the white rami communicantes between the cord and the sympathetic system at the solar plexus and causes the drop in blood pressure. Koster says that the drop in pressure is immaterial and does not even keep track of it. This, I believe, is a little too careless, though I have seen the pressure drop to zero without ill effects. Sise of Boston gives us which I think is a very good rule, viz., when the pressure drops 30 per cent of the original systolic, administer two or three minims of adrenalin and massage it in. Ephedrin is of no benefit after the white rami are paralyzed.

I use novocaine crystals and can control the height and duration of anesthesia much more accurately than I can with Pitkin's solution, for with spinocaine I do not know whether I will get anesthesia of the ankles or of the scalp or of both.

I have not done any high work with spinal anesthesia except that once I extracted a couple of teeth under it. The tooth pulling was an accident. This patient had a couple of troublesome incisors and when she said that she was numb all over including her scalp, I finished the pelvic operation, picked up a forceps and extracted the two teeth. She said that it did not hurt much but I do not know whether it did or not. That was my highest operation with this anesthesia.

Ephedrin is valuable. I give three-fourths grain five or ten minutes beforehand if the dose of novocaine is 100 mg. or less, and one and one-half grain if 150 mg. or more. The duration of the effect of the ephedrin may be responsible for a peculiar phenomenon that I have noticed on several occasions and this is that at about the end of an hour, the pressure will suddenly drop without apparent cause to zero. This should cause no uneasiness if the patient is in the Trendelburg position as there will be no cerebral anaemia and therefore no after effects. The initial drop in pressure in the first ten or fifteen minutes will, however, occasionally cause some nausea.

Sise states that the danger of cerebral anaemia in spinal anesthesia is due to the damage to the brain cells when the anaemia persists for as long as ten or fifteen minutes, as this causes a cytolysis of the nerve cells which results in permanent injury to them. The result is avoided by the use of the Trendelenburg position which insures an adequate blood supply to the brain, irrespective of the systolic pressure.

I think that this is one of our most valuable forms of anesthesia but I do not regard it as applicable to all cases.

DR. R. L. SANDERS, Memphis, Tenn.: I bring you greetings from Tennessee and especially from Memphis. I have enjoyed the program so far, and especially this most excellent paper by Dr. White. Hearing a discussion on a subject like this, that is more or less new and yet it is not new, it has just come to light again, one is always reminded of our various epidemics of disease. Going back through medical history one finds an epidemic of influenza once in a while that causes the death of many people. The same condition obtains with reference to smallpox, meningitis and other diseases. Many phases of medicine and surgery go through the same sort of cycles. During the twenty-five years that I have been in the profession, waves or epidemics of spinal anesthesia have occurred from time to time, and while there have been a few lives lost, yet there has been much improvement in the method. This last epidemic was largely sponsored by Dr. Pitkin. On account of his agitation the method has come into more or less common use. It is being used in almost every town and village in the country. It is fortunate that the method has come into use again, but the enthusiasm should be tempered with caution lest the method should be indiscriminately used. There are certain dangers that require warnings.

A master surgeon once stated that he preferred to have an abdominal operation than a hypodermic or an intravenous injection of medicine. Once beneath the skin or into the blood stream the drug cannot be taken back. The same may be said with reference to injecting any substance into the spinal fluid. In the city of Boston last year it is reported that fifteen lives were lost on account of spinal anesthesia. Similar cases have been reported sporadically throughout the country. Likely if the whole truth were known the aggregate death rate would be higher than is supposed. We have used the method well over one hundred times, but the cases have been carefully selected. Two patients died. They were both debilitated and in poor condition. The same result possibly would have obtain after the use of general anesthesia. Such experiences makes us use the method with much caution.

In January of this year I attended the Pan-American Medical Association in Panama City. I saw the native doctors using spinal anesthesia almost as a routine. Dr. Boyd, who is the chief surgeon, of the St. Thomas Hospital said they had used it more than four thousand times without a death. The interns or any of the physicians, without special training, were giving the drug in the spine without much concern. I am sure there is a wide margin of safety, and yet we must recognize the element of risk.

Dr. White properly emphasized many valuable points in the use of the method. In cases of acute intestional obstruction I know of nothing that is so spectacular and satisfactory as the relaxation of the abdominal wall, and the ease of handling the viscera under spinal anesthesia. We have used it many times and I am convinced that it is the method of choice almost regardless of the patients condition. For resection of the small intestines, the colon, the rectum, the bladder and in many pelvic operations and prostatectomies it is a most satisfactory method. We have used it exclusively in amputations of the leg. Shock is practically eliminated, and the patients have done well. Dr. White said it should be limited to operations below the diaphragm and especially below the umbilicus. This statement is quite correct. In our experience it has not been wholly satisfactory in gall-bladder and stomach surgery. In spite of all of its advantages, like everything else, it has its disadvantages and dangers.

I would like again to emphasize a point referred to by Dr. Ogden. It is most important to keep the head lower than the pelvis after the first five minutes.

Dr. White's splendid paper is timely and I congratulate him upon his presentation.

DR. A. D. CATHEY, El Dorado: I have enjoyed Dr. White's paper very much. I think it is a very timely one. Spinal anesthesia, I believe,

is a method of anesthesia that is coming to stay because more than ever before the advantages of it are beginning to be realized. I believe the reason it has not been adopted more generally heretofore is because of the great number of methods used, the great variety of drugs used, each one with a different technique and method. There has been a confusion and a man doesn't know what method to use. I don't believe it makes a great difference which method is used so long as the technique is properly mastered. There are the heavy solutions and the lighter solutions. The position of the patient following the injection will vary with the gravity of the solution injected. Personally I prefer the lighter solutions and I also prefer the spinocaine because it is the only one I have used. But I am trying to learn how to use it and so far I am thoroughly satisfied with it.

Dr. White mentioned that he has been using a larger dosage than Dr. Pitkin recommends. In Dr. Pitkin's technique, as Dr. White understands it and as I have understood it and have been using it, is to immediately place the patient in the Trendelenburg position. Well, that leaves the injected solution in the lower end of the spinal canal, not permitting it to rise to the proper level; and for that reason it has been necessary to use a larger dosage in order to get the proper height of anesthesia.

Just before we came up here I assisted Dr. White with an operation and I suggested that the patient's head not be immediately lowered. We left it up or only slightly lowered for a minute or two minutes and, instead of having to wait for half an hour as we have on former occasions, we got a prompt anesthesia extending above the umbilicus and then we placed the patient in the Trendelenburg position to prevent the anesthesia from extending higher.

Of course, there have been deaths following spinal anesthesia and it has been promptly and completely and thoroughly checked up against spinal anesthesia. Perhaps, they were bad risks and if a general anesthesia had been used they might have died promptly, or they might have lived several days and then died, and the operation blamed for it, when in fact the death was the indirect and late result of the general anesthetic with the increased difficulty of performing the operation. So, I believe when death follows spinal anesthesia, it kills them quickly and the general anesthetic kills them slowly. The more difficult, the more traumatizing the operation, the more necessary and essential, I believe, it is to use spinal anesthesia. I do not advise its use in simple and easily performed operations unless there is some special contra-indication to general anesthesia. I am very glad to have heard Dr. White's paper.

DR. ARTHUR F. HOGE, Fort Smith: There are one or two points I should like to discuss about spinal anesthesia and especially spinocaine, one of which I have not noted in any of the articles that have appeared on this subject and which may be of interest to you or those of you who use spinocaine. It occurred to me that since this anesthesia is much a matter of gravity that the anesthesia would be more perfect if the patient were to lie upon the opposite side for a few moments after introduction of the anesthesia agent. If we are doing a right inguinal hernia operation, we place the patient on the left side for the injection and let him lie upon the left side with the head slightly lower for some minutes after the spinocaine has been introduced. The spinocaine being lighter than the spinal fluid tends to bathe more effectively the nerve roots on the right side. On the other hand, if we are doing an operation on the left side of the abdomen, we place the patient upon the right side for the injection. After a few minutes has lapsed, we place the patient in the usual dorsal position with the head lowered about fifteen degrees and the patient is prepared for operation.

With reference to history on spinal anesthesia I think that possibly Dr. White has made an error. He is correct in stating that Corning was the first to do lumbar puncture, but Dr. Matas has been generally credited with having been the first to do an operation using spinal anesthesia in this country. This was done in 1899. Corning did his lumbar puncture in 1884. Dr. Matas used stovaine which for a time was quite popular.

Spinal anesthesia, as Dr. Sanders said, became popular. There was a wave of popularity followed by unpopularity because of the danger incident to it. Because of the better understanding of technique, it has again become popular in certain sections. Babcock now reports some twenty thousand cases without a death. It would appear that in selected cases it has a definite field of usefulness in which it has advantages over any other type of anesthesia and in which the advantages outweigh the disadvantages. It should not be used, I believe, indiscriminately.

One thing I think might be brought out that Babcock stressed so strongly in the Surgical Clinics of North America a few months ago and which I think those of us who are using spinal anesthesia should bear in mind is the fact that we should have what he terms a resuscitation drill for the resuscitation of the patient promptly. In his work he has his assistants so trained that he can introduce into the patient's veins in one minute and a half after the order has been issued a saline solution containing adrenalin or ephedrin that immediately raises the blood pressure. Ephedrine may be used hypodermically and if the blood pressure despite the use of it continues to drop then Babcock's resuscitation drill is in order, and he states that if more than a minute and half lapses from the time the order is given until the solution is flowing into the patient's veins there is something wrong with the team work. So we have tried to have the saline solution at the proper temperature with the apparatus ready, and if it becomes necessary at any time during the course of the operation to do a resuscitation of the patient because of lowering of blood pressure or shock, we feel that we can meet the emergency promptly and satisfactorily. Thus far our results have been satisfactory. Nevertheless, I have a great deal of respect for the dangers of spinocaine or spinal anesthesia.

Dr. Lahey told me last fall in Chicago when I asked him about his experience with spinocaine that there had been five deaths in Boston incident to spinal anesthesia and possibly some have been added to the list since then. Deaths following spinal anesthesia have been due perhaps to the indiscriminate use of this method or unfamiliarity with the technique, or perhaps due to the inherent dangers of the method itself. In any event, the dangers should be respected and all the safeguards we have at our command placed around the patient.

One other practical point that I think might have some merit is the fact that the patient should remain in a semi-Trendelenburg position

from the time that the anesthetic solution is introduced until several hours have lapsed after the operation. We place our patients upon a carriage with the head lowered. We have a wooden block placed under the lower end of the carriage so that the patient's head from the time the anesthesia is administered until several hours have elapsed is constantly lower than the extremities or the pelvis. The foot of the bed is elevated immediately after the patient leaves the room for the operating room and is maintained in that position until I see the patient in the evening. Also a nurse is constantly in attendance observing the condition of the patient for unless some one who is alert is on the job calamity might overtake one when it is least expected.

Bearing in mind the precautions that are to be observed and the proper selection of cases I believe that spinal anesthesia is a very satisfactory and relatively safe form of anesthesia and it will become much more popular in the future.

I wish to thank Dr. White for having had the pleasure of listening to this paper.

DR. JAS. A. FOLTZ, Fort Smith: I think it is elucidating to have both sides of every question discussed somewhat. Up to this time it seems there has been but one side to this. At the present time, in the kaleidoscopic changes that are taking place in medical procedures, one is between two emotions; one prompting him to be up-to-date, to grab on to everything that is known and tried out and not be a back number, and the other pitfall, and I think it is equally a pitfall, is to hang on to the old things because they are old and because you don't want to break into anything that is new. As is always true, the best procedure lies in the old adage, "Be not the first by whom the new is tried nor yet the last to lay the old aside."

I have practiced surgery for about thirty years and so far I have never seen a death either in my practice or in that of my colleagues from ethylene, from gas oxygen, from gas oxygen ether or from ether straight. Last summer I had the privilege of spending several weeks in Chicago at Dr. Bevan's Clinic. I asked Dr. Arthur Dean Bevan this question, after having watched several score of operations at the Presbyterian Hospital, why he didn't use spinal anesthesia. And he gave me an answer. I thought at any rate, whether he was right or wrong, it was a beautiful thing, with a man as big as he, a man as powerful as he, a man with such experience and with such influence, that he still kept the human side of the thing uppermost in his mind. He said, "Doctor, we have investigated this pretty thoroughly here. I don't know what the future of it is going to be. Some of our colleagues here in Chicago are using it with great success. I admire their results and their work. Others are condemning it. Men of skill and repute are not using it at all. I have tried to decide the question as to whether or not I should use it in our investigations here at the Presbyterian Hospital. I have taken into consideration the various phases of the question. And I asked myself the question whether, if I were to be operated on, I would want spinal anesthesia, and my answer to that question and my answer to you is that, if I were to be operated today I wouldn't want novocaine, spinocaine or anything else put in my spine that I couldn't control. And if I feel that way about myself I have not the moral right to do that to a patient which I would not do to myself." Whether he was right or wrong in that, it was, as I say, an illustration of the man, one of his standing, who could use anything he wanted to, with all the material that he had, and yet maintained that he wouldn't want to use anything that he wouldn't want to use in his spine. He said that the fact, of course, remained unquestioned that at present spinal anesthesia had the highest mortality of any other form of anesthesia. I did not take the trouble to look that up but that was Dr. Bevan's statement to me. I think that there are certain cases where perhaps it would be satisfactory to use spinal anesthesia, but I am not prepared to think that at present it should be the anesthetic of choice. (Applause.)

DR. WHITE, in closing: Well, at any rate it seems that one thing I succeeded in doing was to stir up an argument. Dr. Cathey, Dr. Bush and myself have been using spinocaine in a great deal of our work since last October and we have been very much enthused with the results obtained so far. Dr. Engle has been our principal psycho-anesthetist in these cases, and needless to say he has been a good one.

In answer to Dr. Ogden in regard to the different drugs used in spinal anesthesia, I am like Dr. Cathey in this matter. The only one with which I have had any experience at all is spinocaine. I obtained considerable data and statistics from various authorities over the country before beginning to use spinal anesthesia and before composing this paper, and from the data obtained from these sources it seems to me without a doubt that it has been generally conceded that spinocaine is by far the safest form of drug to use in spinal anesthesia.

In regard to the blood pressure question that Dr. Ogden brought out, we are not paying as much attention to blood pressure now as we did at first. We find that very soon within three or four minutes time it returns, and for this reason we have been disregarding this to some extent here of late. We decided that it did not amount to very much unless there should be a sudden marked drop.

There are many new preparations on the market today, including neocaine, tutocaine, straight novocaine crystals and various other drugs, all of them having a good many ardent followers, but as previously stated, I am only acquainted with spinocaine.

There are four factors governing the success of spinal anesthesia in regard to the degree of anesthesia obtained and the rapidity with which the anesthesia is obtained as well as the duration of the anesthesia. They are, first, the fusion of two fluids of unequal density. Second, the force of the injection, the force used at the time of injection directly into the spinal canal. Third, the factor of gravity, dealing principally with the position of the patient. And, lastly, the question of the anesthetic used.

In answer to Dr. Hoge's question about the history and about Dr. Matas, I only wish to say that I have obtained that information as I did in regard to the use of spinocaine. I gathered together all the data and statistics I could find, and it seemed to be conceded that Dr. Corning of New York was the first to begin the use of spinal anesthesia.

Also, in answer to Dr. Hoge, I wish to say that we keep our patients in the Trendelenburg position for three hours after they have been returned to the room.

In answer to Dr. Foltz, I wish to compliment him on his great success over a period of thirty years. Of course, I haven't practiced that long, and only for the past eleven years but I haven't been so successful in regard to the use of general anesthesia even over a period of eleven years. Further in answer to Dr. Foltz concerning his statement that he would not have anything like that injected into his spinal canal, personally, if I should have an attack of appendicitis tomorrow I would very much prefer that my appendix be removed under spinal anesthesia. I thank you.

HYSTERIA

Thad Cothern, M. D., Jonesboro

This disease condition for a long time was thought to be caused from vapors and other influences arising from the womb, so the name hysteria was given to it. It was then thought to be confined wholly to the female sex. In more recent times a careful study of the endemic and epidemic forms of it that sometimes sweep whole settlements or nations, has shown it to be equally shared by the male.

Hysteria is a psychoneurosis and rightfully belongs to the neurologist and psychiatrist and not in the field of general medicine. It has been found that the males more often affected belong to the lower strata of society, those affected being of the less aggressive and more dependent type. On the other hand, it seems to be prevalent in the female occupying higher stations in life; principally those having more time to entertain themselves than pressing immediate duties for the service of others.

This disease is common to all countries and to all peoples, yet, it seems to appear more frequently in the Latin, the Slav and the Hebrew races.

Heredity plays a very important role and it seems to be associated with the stigmata of degeneracy in some form, for it occurs not as an infectious or secondary condition, but appears under the general heading of heredity or degeneracy for the want of a better term to define it.

CAUSE

A careful history of the patient often uncovers the exciting factor in these cases. A long continued period of repression or some great emotional strain finally results in a nervous explosion peculiar to this trouble.

Traumatisms, especially repeated ones to some of the sensory points of the body may excite the attack, as well as the various intoxications, secondary to some of the infectious diseases, or due to various drugs, chemicals, alcohol, sexual excesses, chagrin, etc.

One pathologic condition always found is that of anemia. The stigmata of hysteria may, and often does, exist fairly constantly. There may be areas of anesthesia, hyperesthesia, paralysis, contracture, deformity, nausea, elevated temperature; in fact, any condition upon which the patient's mind and imagination may be fixed.

Hysteria may similate practically any disease condition and we might say that fully one-fourth of the patients operated upon for various surgical conditions are found to be at bottom some stigmata of hysteria, which the operation may benefit, though more often it fails. The appendix, the gall bladder, the female organs and adanexia are very often involved in this catagory, and these operations are very popular with many patients and in many clinics.

Theoretically, the diagnosis should be very easy because, fortunately, few people are able to constantly fix their mind on more than one or two features at the same time, so when we find areas of anesthesia, paresthesia, contracture, paralysis, deformity and all such others as might be listed, only one, seldom as many as two, of these conditions can be constantly elicited, while in true nervous disorders it takes a chain of these to make up a group, such as is common to solerosis, myelitis, a neuritis, etc.

By diverting the patient's mind these various stigmatic conditions disappear, and only reappear when the patient can get the mind again centered upon them.

Fortunately, while the hysteric manifestations may dominate all of the symptoms a patient may complain of, as a rule a genuinely pathologic condition, if severe enough to be noticed by the patient, causes the psychic symptoms to disappear. Seldom are the pulse and respiratory rate and rhythm disturbed unless they happen to be one of the factors upon which the patient's mind is centered. Fortunately, they become normal as soon as we can get the patient thinking of something else.

Automatism plays a very important role and practically all movements or action takes on that character, though in the acute hysteric attack or explosion, all forms of convulsions, contractures, tremors, distortions and movements may be manifest.

It has been claimed that certain features, such as closing the fingers over the thumb, a super plantar flexion of the foot, a knitted

brow with closure of the eyelids, and periods of attentive listening are always present, and while frequently one or more of them may be present, yet, they are all wholly absent often enough to throw us off our guard.

'Tis so little we know about diseases of the nervous system, and especially those of a psychic nature, that we can frankly say that we will greatly hesitate before making a cocksure diagnosis of hysteria, for it has been our good fortune, or misfortune, more than once to make a positive diagnosis of hysteria and as positively inform the relatives that the condition was one of hysteria and would soon disappear, when the patient would succumb by the time we were through speaking.

The central nervous system, though functioning adequately, may be so overwhelmed by the disfunctioning of the sympathetic system that we are unable to tell the difference between the somatic function and the hysteric ones, causing us to find ourselves making serious mistakes.

This condition, as a rule, persists over long periods. A psychic analysis of the patient may sometimes place all the cards on the table face up, and the hysteria be at an end. The younger the patient, the more hopeful we are for a recovery. Usually the environment and family circle in which the patients move are not condusive to their recovery. Usually one of the first things to suggest itself in the treatment is a change of environment, for if we succeed in getting the patient away from family and associates for even a short period of time, we can, as a rule, soon see some benefit.

As stated before in this paper, the only constant pathologic condition found with hysteria is an anemia, and just what anemia is brings on more questioning and more talk.

Nerve sedatives, regulation of diet and positive suggestions often are very helpful. For immediate relief in the acute attack we know of nothing better than something to deeply affect the vegetative nervous system, such as a shot of apomorphia, or the production of a mild shock in some way. Some years ago we noticed a short article stating that practically all patients of this type would be greatly benefited by large doses of aromatic sulphuric acid. Where we have felt sure of our diagnosis, and there was nothing in the way to interfere with the use of this remedy, we have given it, and have thought that we secured some results. Whether its benefit was towards the re-establishing of the hydogenion balance disrupted by the anemia, or whether it is the taste and the suggestions going with it that gave the results, we are unable to say.

A frank talk with the patient often helps and just as often loses the good-will and the friendship of the family and friends. About all that can be said is, "It is the physician who is most sure of himself and of his diagnosis and has a distinct idea of the mental side of hysteria, who best succeeds with general or special treatment."

TWO CASES OF STREPTOCOCIC INFECTION OF TONSILS WITH UNUSUAL COURSE AND TERMINATION*

B. H. Hawkins, M. D., Mena

Case No. One

Mrs. W. C. Age 39; weight about 120 lbs.; height about five feet. Mother of three children—youngest being fourteen years of age.

Family history of no import. Previous health impaired for a year or more, although able to do house work. Had visited in a neighbor's home on several occasions, just previous to her illness, where there were two cases of follicular tonsillitis in children ages seven and twelve years. Present illness began April 8, 1928, with tonsillitis. I first saw her on April 16th. Temperature 103; pulse 116; respiration 20. Lids of left eye swollen and red; tonsils swollen and inflamed. Mucuous membrane of entire pharynx inflamed—marked cervical adenitis with dysphagia. Subsequent visit, five or six hours later, swelling had spread from left eye lids to face and forehead. At this time it could be easily detected as erysipelas which spread over face, scalp and neck completely by April 20th, with temperature 106 to 107, pulse 160, respiration 24, with delirium and inability to swallow.

Patient passed into coma. Died April 21st.

Case No. Two

Mrs. E. Age 72; mother of patient of case No. one; height about five feet two inches; weight about 116; strong for age; previous health good; gave history of having had tonsillitis. Helped care for patient, case number one, until she, herself, became ill, April 19, 1928.

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*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

I first saw her April 20th. Temperature 103; pulse 108; respiration 18. Tonsils swollen and inflamed. Condition of patient gradually grew worse. Inflammation spread from tonsils to pharynx, with difficulty in swallowing, and cervical adenitis. April 22nd, swelling of external opening of left lacrimal duct, which rapidly spread to lids of left eye and face. From this time to the death of the patient, April 25, 1928, was a clinical picture of case number one, except in this case the infection passed through alimentary canal, appearing on nates twenty-four hours before death.

Case No. Three

Age 14; strong and vigorous; about five feet 2 inches tall; weight about 124 pounds. Step-daughter of patient case number one. Became ill April 22, 1928, with temperature 103; pulse 108, and respiration 18. Tonsils inflamed and swollen. This condition continued four days, with temperature 103 to 104, but inflammation was confined to tonsils. Temperature and swelling of tonsils subsided at end of four days. Patient made an uneventful recovery.

Culture made from tonsils of cases number one and number two revealed streptococci.

Treatment

Anti-streptococcus serum—both polyviant and erysipelatous and mercurochrome, one per cent solution, intraveniously. Local applications, antiseptics and supported treatment. All of no avail in case number one and number two.

Summary

It seems possible case number one contracted a malignant type of streptococcus erysipelitis, from cases of follicular tonsillitis, which had an affinity for the tonsils and to spread by continuity of mucous membrane to the face, by way of posterior nares, and left lacrimal duct, and, in addition, in case number two, through esophagus, stomach and intestines to nates, with overwhelming toxemia resulting in death of patients.

A contributing factor in these cases was the lowered vitality (vital resistance) in case number one by previously impaired health and in case number two by advanced age.

DISCUSSION

DR. J. N. McLANE, Hot Springs: I think the best treatment for a streptococcus infection of the tonsils or pharynx is irrigation combined with the use of the streptococic serum. I am convinced that local applications to the throat have a tendency to spread the infection. In irrigating the throat I use a small catheter and pass this catheter through the nares into the naso-pharynx and slowly irrigate with warm saline solution, having the patient hold his or her head well forward so as to avoid strangling. In children, we have to rely on the serum as it is practically impossible to irrigate a child.

DR. P. L. MAHONEY, Little Rock: I hope the doctor's paper has impressed you with the importance of this type of infection in the throat. Often we do not recognize the importance or severity of this type of infection.

With the permission of the chairman, I would like to give a short case report. I was called to see a child about a year ago, shortly after Christmas time, with acute otitis media. Before I left the residence, I was asked to examine the throat of the father. This gentleman was thirty-six years old, and had an acute follicular tonsillitis. There was nothing unusual about the case. The next day I was called to see him and placed him on general routine treatment. His temperature was 102, with the general symptoms that accompany acute follicular tonsillitis. The third day the left side of his throat had the appearance of a beginning peritonsil abscess. The fourth day the cervical glands were enlarged. His temperature was around 102. The appearance of his throat had subsided but he showed a beginning edematous condition of the larynx, the epiglottis and the surrounding tissue. The fifth day the glands in the neck continued to enlarge. His temperature became elevated. He appeared toxic, but the appearance of his larynx had improved. On the sixth day he was carried to the hospital. His pulse at this time was normal. There was no evidence of either laryngeal or pharyngeal involvement at this time. His blood was taken for cultures; smears were taken. It showed streptococcus and staphylococcus in the smears, and a decided blood culture of a hemolytic strain. The glands in his neck were quite extensive. It was decided to make an exploratory incision in search for small pockets of pus, although we felt that we were dealing with a non-suppurative type of infection. There was no pus found. General treatment was instituted; supportive treatment. X-ray treatment was advised and was given to the glands in his neck as we were positive this was the source of infection. He remained in the hospital for a period of six weeks. He had four positive blood cultures. We opened eight metastatic abscesses in both forearms, and gluteal abscesses. There were eight of them developed over his body through an interim of six weeks. Other than supportive treatment and the x-ray treatment, there were no vaccines or serums given and the man made a complete recovery. At that time we became greatly alarmed when we got a positive blood culture of the hemolytic streptococcus as we felt the patient couldn't endure such an infection. We had been getting that right along as we began to make more cultures. The impression I gained was that every case of acute follicular tonsillitis means we must immediately begin to clean house. His teeth should be thoroughly inspected, the gums should be taken care of, the nasal and accessory sinuses should receive appropriate attention, and the patient in general should be considered as a sick individual. We should immediately think of the complications that may arise from such an infection. I think we should consider this infection as a condition that may take away a life.

We should immediately begin by placing our patient in bed and give him the benefit of every treatment at our command to prevent such complications as this man developed.

DR. C. E. BENEFIELD, Fort Smith: This paper brings to my mind a case I had some three months ago which was very interesting to me. I want to say too, that nobody has a gladder hand for our specialists and all that than I, as I believe in, and depend on them; but they commit some monumental blunders sometimes as well as the rest of us I think. This case of mine to which I want to refer was an attack of follicular tonsillitis; twice abscessed and had to be lanced and drained; metastatic abscesses in the axillary glands and along the flexor aspect of the arms, which axillary glands were completely suppurated. Following this the thyroid glands became involved, with a slight hyperthyroidism with pronounced nervousness. I became alarmed about this believing the focal infection responsible for it and referred this patient to her specialist for tonsillectomy. The tonsils were not large though; rather atrophied tonsils, but very much diseased. She went to the specialist, and the returns he made through this patient was not a written statement to me but was this: "Tell Dr. Benefield that your tonsils are normal; as normal as in any throat I ever looked into. There is nothing wrong there. But you have a thyroid involvement." Well I had told her about that, but told her I believed the tonsils were contributing to the thyroid trouble, and the tonsils should come out on general principals, or appearances. She had neuritis from time to time. Well, this return stirred my Irish just a little bit, and so I said: "I have no advice for you, or in the face of this I have no advice to give." But said she to me, "I am coming to, and am depending on you; I am not depending on him, but on you." Well, said I to her, "then you come to my office in the morning and we will remove these tonsils." I removed the tonsils, and it wasn't six weeks until you could see a decided reduction in the thyroid gland. All the neuritis and nervous symptoms were gone; and she continued to improve with the final result that the thyroid gland is now normal. I will say, she lives here in the city and is now in a perfect state of health; and so there can be no doubt that this focal infection from her tonsils was the whole cause of the foregoing trouble.

We all know that the thyroid gland is often enlarged at puberty in our girls, in pregnancy of women and during the menstruating period in women, but that should not interfere with a man doing a tonsillectomy under any circumstances. Go right ahead with it as though there was no thyroid gland involved; because it is purely functional, and invariably helps those cases. So I felt disappointed in this specialist friend of mine, and I didn't want to do that special tonsil work myself. Still I have done lots of it. But I wanted him to do it, but he turned it down as I thought without looking into the merits of the case. I feel our specialists should not pass on these things too positively and too hastily, when the physician who had it in charge has followed it up step by step, in a clinical way. That's a mistake I think. To conclude I wish to say this specialist does not live in Fort Smith, as they all have too much sense, and are too regardful of ethics, and have too much professional courtesy to commit such a blunder. I want to say I enjoyed Dr. Hawkins' paper very much and think it a fine paper.

DR. HAWKINS, in closing: I just want to thank the doctors for their discussion.

Abstracts

ATYPICALLY SITUATED SARCOMA OF CONJUNCTIVA

Howard McIlvain Morton, Minneapolis (Journal A. M. A., December 13, 1930), reports a case of melanosarcoma of the conjunctiva. The tumor was readily removed, and, apparently, without leaving involved areas. The wound healed and looked well at the end of four or five days, when the patient returned home, to report later.

SUDDEN DEATH ASSOCIATED WITH BRAIN CYSTS

Leila Charlton Knox, New York (Journal A. M. A., December 13, 1930), reports five cases of brain cyst observed postmortem during the course of 2,000 consecutive autopsies including only 321 complete examinations of the skull. Three of these patients died suddenly, having been active up to a short time before death. The series includes three angiomatous cysts, with an hemangioma of the spleen; one congenital cerebral cyst associated with a cavernous angioma of the leptomeninges, and one gliomatous cyst. Attention is drawn to the fact that such cysts may be present and even be a cause of sudden death in apparently healthy persons.

ROENTGEN DIAGNOSIS OF ASCARIASIS

Vincent W. Archer, University, Va., and Charles H. Peterson, Roanoke, Va. (Journal A. M. A., December 13, 1930), assert that characteristic roentgen observations are present in a high percentage of children with intestinal ascariasis, as shown by a barium cereal meal. These observations are: (1) soon after ingestion, a cylindric filling defect in the jejunum; (2) later a stringlike shadow, representing the barium-filled enteric canal of the parasite. Roentgen evidence is occasionally definite in the absence of ova in the stool.

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Abstracts

ACUTE BENIGN INFECTIOUS MYELITIS

Attention is called by Irving J. Sands, Brooklyn (Journal A. M. A., Jan. 3, 1931), to a recoverable type of myelitis. Following infection of the upper respiratory channels there occurs, in young persons, paralysis of the lower extremities with loss of deep tendon reflexes, loss of abdominal reflexes, retention of urine, and subjective as well as objective sensory disorders segmental in distribution. There is slight leukocytosis. The spinal fluid shows an increase in protein and relatively little cellular reaction. Recovery is apparently rapid and complete. A relationship between this disease and epidemic encephalitis is suggested.

EXPERIMENTAL AIR EMBOLISM OF THE CORONARY ARTERIES

George Rukstinat, Chicago (Journal A. M. A., Jan. 3, 1931), states that dogs whose coronary arteries are plugged with air die promptly. In such animals and also in human beings dying of air embolism, there are no lesions demonstrable anywhere to explain death unless an exception is made of the presence of air in the blood. In air embolism of the coronary arteries, either recovery or death takes place promptly. Direct cerebral air embolism through the carotid arteries is succeeded by cerebral irritation which does not develop in dogs with solely coronary air embolism, although both may have apparently similar amounts of air in their leptomeningeal vessels. Delayed cerebral air embolism was not observed in dogs recovering from coronary artery air embolism.

ADENOCARCINOMA OF THE HEAD OF THE PANCREAS

Elmer Hess, Erie, Pa. (Journal A. M. A., Jan. 3, 1931), reports the case of a woman who noticed a tumor mass in the right side of the abdomen, which was freely movable. A competent man, head of a prominent diagnostic clinic, reported after a complete gastrointestinal study that the tumor, which apparently was fixed to the lower pole of a freely movable right kidney, was probably a hypernephroma. Several cystoscopic studies were made with final preoperative diagnosis,

calcified cyst of the lower pole of the right ectopic kidney. At operation the kidney was found to be perfectly normal, although freely movable. The tumor mass, which was below the pelvic brim, was easily delivered into the loin incision and easily removed. Death occurred forty-eight hours later. Observations at autopsy revealed that an adenocarcinoma, involving the head of the pancreas, had been removed.

PRINCIPLES OF PROGNOSIS IN CANCER

William Carpenter MacCarty, Rochester, Minn. (Journal A. M. A., Jan. 3, 1931), states that there are at least fifteen factors governing prognosis in cancer: (1) The presence or absence of glandular involvement and distant metastasis. (2) Fixation of growth. (3) Location. (4 and 5) Renal and cardiac efficiency. (6) Anemia. (7) Size of growth. (2) Age. (9) Direction of growth. (10) Loss of weight. (11, 12, 13 and 14) Cellular differentiation, lymphocyte infiltration, fibrosis and hyalinization. (15) Duration of disease. Signs and symptoms in cancer have to do with size, anatomic location, mechanical obstruction and hemorrhage. Even pain is usually insignificant unless associated with mechanical obstruction. None of these are diagnostic of cancer or even prognostic if therapy can be instituted. Many benign conditions present such signs and symptoms and may have been present long before cancer has arisen. Any system of microscopic grading of cancer should not alone be of accurate clinical value without taking many other factors into consideration. Furthermore, any system which merely states that a certain percentage of patients with certain grades live a certain length of time does not necessarily furnish data for any specific case. In other words, there is no criterion by which one can state that a given case belongs in the favorable or unfavorable percentage. Moreover, the wise and successful practitioner of the art of medicine will certainly take all possible factors into consideration in making a clinical prognosis. These practical clinical generalizations should not inhibit or prohibit pure scientific studies of possible factors which may or may not be indexes of behavior rather than prognosis in cancer. Perhaps these indexes might be of clinical value in the future, but at present all grading of cancers should be considered in the investigative or experimental stage.

DEVELOPMENTS IN THE PROBLEM OF ARTHRITIS

In his review of this subject, Ralph Pemberton, Philadelphia (Journal A. M. A., Jan. 3, 1931), stresses the fact that attacking this problem with any drug or any vaccine alone is too often like firing at the head above the ramparts instead of at the fortification itself. In the opinion of most of the American committee for the control of this disease, it is of the first importance to envisage the disease as a whole instead of focusing on any factor, be it mechanical, bacteriologic or nutritional, which may merely precipitate it. In arthritis a variety of factors contributes to bring about the disease. No agency or organism is recognized by the American Committee for the Control of Rheumatism.

Personal and News Items

Dr. J. G. Wilson of Ulm was a recent visitor to Little Rock.

Dr. M. C. Richardson of Corning spent the holidays in Little Rock.

Your 1931 dues are now payable to your County Secretary. Please attend to this at once. If you have already paid your dues, disregard the statement to be found in this issue of the Journal.

The fifty-sixth annual session of the Arkansas Medical Society will be held in Texarkana, April 21, 22, and 23. Those wishing to present papers, communicate at once with Dr. R. J. Calcote, Chairman, Scientific Program, or to the State Secretary.

The Drew County Medical Society elected the following officers for 1931:

President, M. Y. Pope, Monticello; Vice-President, J. S. Wilson, Monticello; Secretary-Treasurer, A. S. J. Collins, Monticello; Censor, S. M. Gates, Monticello.

Dr. Jo M. Ferguson, medical officer in charge of United States Veterans Hospital No. 78 at Fort Logan H. Roots, has been transferred to Lexington, Ky.

His successor will be Dr. John A. Pringle, clinical director and second in command at Hospital No. 78. The transfers, which were authorized by Frank T. Hines, director in charge of veterans' affairs at Washington, D. C., will be effective January 15 and 16, respectively.

We regret to announce the death of the mother of Dr. Geo. B. Fletcher of Hot Springs, Mrs. W. P. Fletcher of Lonoke.

We announce the marriage of Dr. Carl A. Rosenbaum of Little Rock to Miss Mildred Davis Obermiller of Jackson, Mo.

Dr. J. H. Stidham of Walnut Ridge has accepted a position as eye, ear, nose and throat surgeon in the City Hospital at Safford, Ariz.

Dr. G. Max Watkins of Walnut Ridge, for over a quarter of a century an active physician of that city, and who is now recuperating from a recent illness, at Eureka Springs, has advised friends that he is recovering rapidly.

A Yell County Medical Society was organized Thursday, January 8, with the following officers elected: Dr. Lee Montgomery of Gravely, president; Dr. Roy I. Millard of Dardanelle, vice-president, and Dr. E. J. Haster of Dardanelle, secretary and treasurer. The society was organized at a banquet of the Pope County Medical Society held in Dardanelle. Twelve Yell County physicians were present and they agreed to meet the first Monday of each month. The next meeting will be held at Ola, February 1.

The Johnson County Medical Society held its annual banquet, December 31, 1930, at the First Presbyterian Church. Dr. G. L. Hardgraves, president, was toastmaster. Guests included Dr. Anderson Watkins of Little Rock, Dr. S. J. Wolferman of Fort Smith, and Dr. Charles Holt of Fort Smith, and all members of the Pope, Yell and Franklin County Medical Societies.

Dr. R. L. Smith of Russellville, Dr. E. H. Hunt, Dr. W. R. Hunt, Dr. G. R. Siegel and Dr. R. N. Manley of Clarksville made addresses.

Auxiliary Notes

The Woman's Auxiliary to the Pulaski County Medical Society met in December at the Woman's City Club with Mrs. R. E. Pryor, Mrs. R. M. Blakely, Mrs. J. R. Crawford and Mrs. J. P. Delaney as hostesses. A brief business session was presided over by the President, Mrs. Anderson Watkins. Following the business session, Mrs. Lorene Crank Lloyd was presented in a group of entertaining readings. Later delicious refreshments, emphasizing the holiday motif, were served. The next meeting will be held with Mrs. L. V. Parmley, on January 21.

The Woman's Auxiliary to Faulkner County Medical Society met December 18th with Mrs. N. E. Fraser.

Mrs. H. E. Cureton, President, called the meeting to order.

After a short business session, Miss Madia Grissett, Supt. Faulkner County Hospital made a talk asking the auxiliary to support the drive being made to raise $1,200.00 for the immediate needs of the hospital.

Mrs. G. S. Brown read a paper "Immunizing against the Infectious Diseases of Childhood."

During the social hour Mrs. Fraser served a salad with cake and tea.

Correspondence

TREASURY DEPARTMENT
Office of
Collector of Internal Revenue
Little Rock, Ark., Jan. 5, 1931.

To All Narcotic Registrants:

Sir:

The attention of all narcotic registrants is invited to Section 1, Act of December 17, 1914, as amended, which provides for the registering with the Collector of Internal Revenue and payment of special tax on or before *July first of each year,* or on or before the date upon which liability is incurred.

Section 9 of the Harrison Narcotic Law provides that anyone who violates or fails to comply with any of the above requirements "shall, on conviction be fined not more than $2,000.00 or be imprisoned not more than five years, or both, in the discretion of the court.

In order to avoid the specific penalty provided by the law, it is urged that you exercise precaution to file your return and pay your special tax on or before July 1 of each year.

In case of removal from the location shown on your special tax stamp you must notify this office, giving the date of such removal and return the stamp for transfer. In case such notice is not sent within the month in which the removal occurred, the stamp may not be transferred—but new registration and payment is required.

Yours very truly,

A. J. RUSSELL, *Collector.*

Obituary

BEAN, JOHN W.—Dr. J. W. Bean of Marvell, died December 28, 1930, following a brief illness. Aged 70. Surviving are his wife and his brother, Dr. W. B. Bean of Marianna.

HUNN, JOHN THOMAS—Dr. J. T. Hunn of Harrisburg died January 3, 1931. Aged 53. Dr. Hunn came to this State from Kentucky about twenty-five years ago. In recent years, he operated the Hunn Clinic.

County Societies

FAULKNER COUNTY

(Reported by Marcus T. Smith, Sec.)

The Faulkner County Medical Society met at the office of Dr. Marcus T. Smith in Conway, December 18, 1930.

Present: Downs, McMahan, Dawson, McCollum, DeJarnett, Smith, Cureton, Fraser, Henderson, Muse, Dickerson, Brooke, Dunnaway, Westerfield.

Clinical cases were reported by Dr. Muse and others.

On motion, Drs. Westerfield, Cureton and Dawson were appointed as advisory committee to the Woman's Auxiliary to Faulkner County Medical Society.

Mr. J. Frank Jones came before the Society soliciting the support of the Society in the interest of the Faulkner County Hospital.

The election of officers resulted as follows: President, J. S. Westerfield; Vice-President, I. N. McCollum; Secretary-Treasurer, Marcus T. Smith.

SEVIER COUNTY

(Reported by C. E. Kitchens, Sec.)

The Sevier County Medical Society met in DeQueen, December 9, in the office of Dr. C. E. Kitchens. The following members were present:

R. L. Hopkins, M. L. Norwood, C. A. Archer, B. E. Hendrix, J. C. Graves, C. E. Kitchens. Visitors: Drs. Pearson and Good of Texarkana.

Officers elected for 1931 were:

President, C. A. Archer, DeQueen; Vice-President, B. E. Hendrix, Gillham; Secretary-Treasurer, C. E. Kitchens, DeQueen; Delegate, J. C. Graves, Lockesburg; Alternate, M. L. Norwood, Lockesburg.

The scientific program consisted of the following papers:

"Cardiac Pains" by Dr. Pearson.

"Socium Amytal" by Dr. Good.

Book Reviews

A Text-Book on Orthopedic Surgery.—By Willis C. Campbell, M. D., F. A. C. S., Professor of Orthopedic Surgery, University of Tennessee, College of Medicine, Memphis. Octavo volume of 705 pages, with 507 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, $8.50.

This splendid book presents the subject in three main divisions. "Affections of the Joints;" "Affections of the Bones," and "Affections of the Soft Tissues." Emphasis is placed upon the differential diagnosis, and the etiology and pathology are discussed in a very practical manner. The last chapter describes "Congenital Anomalies.."

The Surgical Clinics of North America.—(Issued serially, one number every other month.) Volume 10. No. 2. (Chicago Number, April, 1930). 252 pages with 72 illustrations. Published by W. B. Saunders Company, Philadelphia. Price per clinic year (February, 1930 to December, 1930). Paper, $12.00; Cloth, $16.00.

This volume opens with the clinic of Dr. Arthur Dean Bevan, on Gallstone Disease. The article is illustrated showing his S-shaped incision employed in surgery of gallbladder and bile tracts. Dr. Bevan says: "In planning this incision he does not paralyze any of the rectus muscles except a narrow strip which is left internal to the incision."

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in these officers.

DIRECTORY

OF THE

COUNTY SOCIETIES OF THE ARKANSAS MEDICAL SOCIETY

1931

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DALLAS	H. H. Atkinson	Fordyce	J. E. M. Taylor	Sparkman
DESHA	H. T. Smith	McGehee	W. B. Grayson	McGehee
DREW	M. Y. Pope	Monticello	A. S. J. Collins	Monticello
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THE TREATMENT OF CYSTOCELE WITH SPECIAL REFERENCE TO THE WATKINS INTER-POSITION OPERATION*

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This subject has been chosen because, after a fairly large observation of the methods used in some of the leading hospitals of our country for the relief of cystocele, we found that it was inadequately treated in the majority of cases, and after an extensive review of the literature, no unanimity of opinion was found. The ancients used fumigations and hot fomentations; our forefathers placed their reliance upon the pessary and tampon, while today we hide behind a multiplicity of more or less elaborate plastic operations. The confusion is due to lack of appreciation of the pathological anatomy of the condition.

The anatomical structure most affected in cystocele is the endo-pelvic fascia; particularly that specialized portion known as the utero-pubic ligaments. The easiest way to visualize this fascia is to consider it as a direct continuation of the transversalis fascia of the abdomen; firmly adherent to the symphysis pubis, the pubic rami, and the white line—a firm sheet which bridges over that portion of the pelvic outlet not protected by bony structures; and which is perforated anteriorly by the urethra, posteriorly by the rectum and in the middle by the cervix. The uteropubic ligaments, or the bladder pillars, are those thickened portions which are attached to the symphysis in front, and continuous with the cervical portion of the broad, or as they are known here, the cardinal ligaments of the uterus posteriorly. This latter attachment is necessarily the weakest point, being farther from any bony attachment, and the giving way of which is the main factor in the production of cystocele.

The bladder itself is maintained in place by two distinct sets of supports; namely the supporting apparatus consisting of the uteropubic fascial plane with the aid of the posterior segment of the pelvic floor, and the suspending apparatus consisting of the subperitoneal connective tissue, the plicae vesicae, the urachus and attachment to the anterior surface of the uterus. The bladder itself is divided into two hemispheres, a fixed portion which is inferior, and a movable portion which rises into the peritoneal cavity upon distention of the viscus. The concave movable portion lies in the concave fixed portion as one saucer in another when the bladder is empty.

The accepted definition of cystocele is that it is a hernia of the bladder and usually caused by injuries received during parturition except in those rare cases due to congenital defects. However, it rarely exists alone and is almost always associated with varying degrees of uterine prolapse and retroversion, relaxation of the perineum, and frequently with hypertrophy, laceration and infection of the cervix. There is a controversy over the exact nature of the primary lesion, but it seems reasonably clear from observation at the time of the operation, that there are two distinct types of injury.

First, the uteropubic fascia may be stretched so as to cause a thinning out in the mid line and diastasis of the bladder pillars, rather than an actual tear. It is perfectly plausible that the pressure of the advancing fetal head upon a moderately distended bladder, during the second stage of labor, may produce this weakening. Anyone who has observed the anterior vaginal wall during labor will have noticed a bulging of this region during each

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

pain, particularly, if the bladder contains any quantity of urine. The bladder when pressed upon by the advancing fetal head cannot rise upward in the abdomen as normally occurs because of the distention of the lower uterine segment, and the pressure of the anterior abdominal wall upon it. Pressure upon a body of fluid is transmitted equally in all directions. The point of strain is therefore upon the uteropubic fascia. This is sufficient reason for advocating the routine catheterization of the bladder previous to the onset of the second stage of labor as a prophylactic measure.

Secondly, the uteropubic ligaments may be torn away from the cervical attachment particularly during a rough operative delivery. The pathological changes resulting from these injuries may be summarized as follows:

1. Detachment of the anterior vaginal wall from the cervix with eventual loss of the normal invagination.

2. Stretching and thinning of the uteropubic fascia.

3. Displacement downward of the bladder.

4. Elongation of the anterior-posterior and transverse diameters of the anterior bladder wall and base of bladder.

5. Prolapse of cervix and uterus with retrodisplacement of the latter due to traction upon the uterine ligaments.

Any operative procedure not based upon correct anatomical and surgical principles, or which is not directed toward lesions associated with cystocele will fail in the end. Too often we see an attempt made to repair a cystocele by simply excising a diamond shaped flap from the anterior vaginal wall and approximating the edges in the mid-line by plicating the thinned out uteropubic fascia. This throws the base of the bladder into folds resulting in urinary stasis, and only accentuates the lengthening of anterior-posterior diameter of the anterior vaginal wall. Worst of all, the cystocele recurs. Again we see the attempt made to cure cystocele by an abdominal suspension or fixation of the uterus, or even by a supra-vaginal hysterectomy. In a few months the cystocele is worse than originally. In other cases, the uterus is removed by the vaginal route for cystocele, when it would be so much better to use a less shocking procedure which would utilize the uterus like the keystone of an arch.

Realizing that cystocele is essentially a hernia, the surgical principles evoked for its cure must include a wide dissection of the defect, a mobilization and elevation of the base of the bladder, an excision of the thinned out mucosa of the anterior vaginal wall, a thorough closure of the defect, and restoration of the normal invagination between the cervix and the anterior wall. In addition, the uterine prolapse and retroversion must be corrected, the lacerated and hypertrophied cervix dealt with, and the relaxed perineal floor repaired. The choice of the method to be used depends upon whether the patient is well within the child bearing age or beyond the menopause; upon the size and condition of the uterus; and upon the degree of prolapse present.

The operation we have been using in the Clinic upon patients well within the child bearing age, and in whom there is no prolapse beyond a first degree, is the method perfected by George Gray Ward. The exact technique employed is described as follows:

The patient is placed in lithotomy position. A Jacob's clamp is applied to the cervix and tension made downward. A T-shaped incision is made from the base of one broad ligament to the other, and then extending it upward from the mid-point to within 1-2 cm. from the meatus of the uthers. The point of a Mayo scissors is inserted at the cervico-vesical juncture and gently pushed upward so as to strike the line of cleavage between the anterior vaginal wall and the bladder. The points are separated and the incision deepened to the bladder. The next step is to free the bladder from the cervix, by blunt dissection with scissors. This is continued up to the peritoneal reflection, and if prolapse is present, laterally to the bases of the broad ligaments. Allis clamps are then applied to the upper and lower angles of each lateral flap and the edge put on a stretch. By a combination of blunt and sharp dissection, the bladder pillars are freed from the anterior vaginal wall well laterally. A point is now selected on the bladder and on the uterus, which when brought together will straighten out the bladder base and these two points are sutured together. The edges of the redundant mucosa are then trimmed away. A No. 2 Chromic catgut suture is then passed through the portion of the bladder pillar adjacent to the cervix on one side, inserted into the mid-line of the cervix in the region of the internal os near where the bladder was attached and out through a corresponding point in the bladder pillar of the opposite side. Two

or three such sutures are used, and then tied. Alexandroff's method should be used where there is a first degree prolapse by plicating the bases of the broad ligaments in front of the cervix. The remaining edges of the uteropubic fascia are approximated with a continuous lockstitch suture of No. 2 plain catgut. A continuous suture of No. 2 plain catgut is used to approximate the edges of the mucosa. A posterior perineal repair should then be performed. This operation has proved to be very successful and will stand the strain of childbirth.

In the child bearing group of patients in whom the cystocele is associated with second or third degree of prolapse, the problem is simplified by using the classical interposition operation of Watkins. This operation is also indicated in all patients beyond the menopause where the uterus is normal in size and the prolapse is not extreme. This operation is attended with no shock and therefore does not endanger life. The majority of the cases will fall in this latter group because the atrophy of the generative organs at the menopause accentuates the symptoms of which the patient complains. The operative approach is exactly the same as that given above except that the peritoneal cavity is entered by an incision sufficiently large to admit two fingers. An anterior vaginal retractor is placed through this incision and held by an assistant. A figure of eight suture of No. 2 chromic catgut is placed in the mid-line through the uterus as high as possible. The ends of the suture are clamped and traction made. This will enable one to place a second similar suture at a higher level. A third traction suture usually suffices to deliver the fundus of the uterus through the incision. The uterus and adnexa are now inspected. If the patient is still menstruating, sterilization should be carried out by amputating the tubes from the cornuae of the uterus. Minor intrapelvic pathology can be corrected. If the cervix be hypertrophied, as it usually is in the cases associated with any advanced degree of prolapse, it should be amputated at this point. We prefer the so-called guillotine amputation. The bladder is elevated in the pelvis and the uterus fixed in its new position. The ends of the highest traction suture are passed into the periosteum of the pubic rami on either side about 2 cm. from the symphysis pubis, and out through the uteropubic fascia and mucosa so that when tied it will cross the anterior vaginal wall 2 cm. from the meatus of the uretha. The other traction sutures are passed in a similar manner including only the pubovesical fascia and the mucosa at lower levels. Redundant mucosa is trimmed away. The edges of the uteropubic fascia and the mucosa are brought together by a continuous lockstitch suture of No. 2 plain catgut which occasionally picks up a bit of the anterior uterine wall so as to obliterate dead space. The fixation sutures are then tied, and the perineum repaired. It is advised to place a drain between the anterior vaginal wall and the uterus. By observing rigid hemostasis, we have never found it necessary to do this. The problem becomes complicated where the body of the uterus is enlarged or where the degree of prolapse is extreme. There are several alternatives in this case, one being a supravaginal amputation of the uterus by the vaginal route, and interposition of the cervical stump as the body of the uterus was utilized above. Another is a resection of a portion of the uterine body. The latter is, however, not a safe procedure. For extreme decensus, a modified Mayo hysterectomy may be utilized. In passing, we may say, that when surgery is contraindicated, a large ball pessary will give good results.

The anesthetic of choice for these operations is spinal or caudal with a preliminary dose of morphine and hyoscine. Preoperative preparation and post-operative care are the same as that employed with any plastic perineal work. Complications are few and convalescence is ordinarily smooth. Catheterization for bladder distention may be necessary for a few times.

The majority of the authorities are in accord in reporting satisfactory end results in about 90 per cent of the cases. Cullen of Baltimore followed 45 patients for 17 years and found that 43 were completely relieved of all symptoms. In one case in which the procidentia was complete, there was a recurrence of the cystocele after 10 years. The Woman's Hospital of New York City reports 96 per cent satisfactory results. Miller of New Orleans reports 36 out of 39 cases with good end results. We have enjoyed equally satisfactory results in our own series. Very few failures are reported. We feel that most of these failures may be attributed to variations from the classical technique of Watkins, to lack of care in placing the first fixation suture in the uteropubic fascia, and in traumatism to

the bladder during operation by separating it too extensively from the fascia, instead of freeing it with the fascia from the anterior vaginal wall. However, the reported failures are very few in well selected cases.

CONCLUSIONS

1. The endopelvic fascia is a definite anatomical structure, injury to the uteropubic portion of which is the chief factor in the production of cystocele.

2. The pressure of the advancing fetal head upon a distended bladder may play a very important part in the production of cystocele.

3. Operative procedures directed toward the relief of cystocele must be based upon correct surgical and anatomical principles and also be directed toward the correction of associated defects.

4. For patients within the child bearing age without extensive prolapse, the best result can be obtained by using the operation devised by Ward.

5. For cystocele in patients beyond the menopause, and in all patients in which it is associated with even mild third degree prolapse, the best surgical treatment is the Watkins Interposition Operation, because this procedure is one of the least time consuming and shocking procedures that can be attempted, and one which will give satisfactory end results in 90 per cent of the cases.

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DIAGNOSIS AND TREATMENT OF OSTEOMYELITIS*

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I shall attempt to bring before you the essential diagnostic and treatment points relative to osteomyelitis. I know of no bone and joint condition in which the surgeon or the general practitioner needs to give more attention toward the diagnosis and treatment than this disease.

First, osteomyelitis is a common disease; second, it is a disease overlooked in the early phases of a diagnosis; third, it is usually diagnosed everything but what it really is, until it is too late. Fourth, it is a common sequela of most any of our acute infectious diseases, especially the "flu," tonsillitis, typhoid fever, bronchitis, pyorrhea aveloris and the more common diseases of childhood and young adults, therefore, one should always be on guard for its appearance at any time. Fifth osteomyelitis is treated as rheumatism, acute rheumatic fever, neuritis, tuberculosis and numbers of other disease before the physician in charge realizes the true condition with which he has to cope.

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The physician attending the case should always keep uppermost in mind the diagnostic points which characterize this disease.

We know osteomyelitis to be a disease common to childhood and young adults. It occurs in about fifty per cent of cases in the lower end of the femur and about 33 1/3 per cent in the tibia with the upper end, near the knee involved more often than the lower end of the leg near the ankle joint.

As to the remaining bones of the body, one is as frequently involved as the other. A point to remember is that none of our bones are immune to this disease.

Inasmuch as acute osteomyelitis is so easily confused with other conditions, and since failure to make an early diagnosis and thus institute immediate treatment is of such disastrous consequence to the patient, it is my intention to emphasize the more salient points in the diagnosis and treatment.

Characteristic Onset of Acute Type

The characteristic onset of the acute type of this disease is always sudden and fulminating in its course, with a usual history of trauma preceding, followed by high fever, chill, increase leucocytosis (10 to 30 thousands) with marked increase of polymorphonuclear leucocytes, pain on deep pressure over the affected area, especially just above or below the joint involved (depending on which bone involved with relation to joint only.) The patient usually states that a few days before they received some kind of injury. For instance, the child will state that he or she had fallen and injured the parts and since then has had pain, boring in character, especially at night with an increase of all the symptoms as the days go by.

Examination of the affected limb shows no sign of redness, swelling or other localized signs of infection, except the pain, especially on deep pressure, and the x-ray which is negative. One should not be misled by this information into believing that he is dealing with a case of rheumatism or acute rheumatic fever, neuritis or possibly a fracture. Especially is the physician in charge misled by the fact that the x-ray of the bone is negative. Let me here warn you that in at least ninety-five per cent of all acute cases one will find the x-ray negative. With the negative findings on the x-ray, do not believe that you are dealing with a fracture or some form of trauma, but always bear in mind the possibilities of osteomyelitis.

One must also bear in mind the underlying pathology and its seat of origin. In spite of the fact that the pain is frequently referred to some other point along the entire shaft of the bone, careful search will usually localize it adjacent to the epiphyseal line, which area is the primary point of pathology and as the disease progresses, it nears the middle of the diaphysis. (See figure 1). On account of its close proximity to the joint with all its symptoms directed thereto, the erroneous diagnosis of tuberculosis is frequently made. This common mistake could be avoided by remembering that tuberculosis invariably travels in the direction of the joint which it invades (See figure 2), while osteomyelitis travels in the opposite direction along the shaft.

As I have so often said in lecturing to the students at the University of Arkansas, osteomyelitis is primarily a disease of the shaft of the bone and tuberculosis is a disease of the joints.

Operation in Acute Stages

Invariably the operation consists of trephining the cortex of the involved bone area near the epiphysis, through a wide incision, thus instituting immediate drainage from the central bone canal. Numerous drill holes are made, but by all means do not enter the joint cavity or injure the epiphysis for to do so, means disaster. Even if there is only a suspicion of the disease, an operation is justified and if the bone has been opened and no evidence of pus is found, comparatively little damage has been done, whereas, if acute osteomyelitis is not operated upon, and nature drills her own hole for drainage, the process will continue along the shaft and cause serious damage and destruction to all the surrounding parts. Then the sinus appears on the surface with all the acute manifestations of cellulitis in addition to the already existing osteomyelitis. The thing to bear in mind is not to wait until this happens for old man Jones across the street will meet you in the front yard of your patient's home and tell you that he believes Bill has a case of bone abscess. It's too late then for you to do any good and your patient is facing the possibilities of serious and crippling deformities, possibly for life.

In dealing with the operation in the acute stage the patient is usually attended with considerable shock, therefore, every precaution should be taken to eliminate it as far as possible or to prevent it entirely. The judicious selection of an anesthetic to be used is most essential.

The operative procedure should be well planned in advance. There should be as little traumatizing of tissues as possible, either in the bone or the soft parts, particularly the muscle tissue; we know that devitalized muscle is considered by most authorities to be the most important shock producer. With all these precautions in mind and carried out to the fullest extent, the progress of the disease from this point on, will depend entirely upon the amount of damage done by the surgeon.

When early and adequate drainage has been instituted the process is usually confined to the epiphysis and very often heals spontaneously, but should the adjacent structures become involved, the condition becomes chronic.

Chronic Osteomyelitis

Chronic osteomyelitis is characterized by the appearance of one or more sinuses discharging pus, with positive roentgenograms and a history of acute osteomyelitis preceding it by several weeks to even several years. Any one of the above findings is pathognomonic of the chronic type.

These typical old chronic cases are so often looked upon as tuberculosis and often come to the hospital with this diagnosis and the advice to have the limb amputated. I am frank to admit that if I amputated every limb that came to me for that purpose, it would pay me to go into the artificial limb business it no doubt would be very lucrative.

As a rule the diagnosis can be made from the history of the patient's previous condition. A history of typhoid fever is frequently given, but, these cases may be differentiated from sarcoma, bone cysts, lues, tuberculosis, Paget's disease and many other bone conditions, however, careful history and x-ray examination are of great importance in excluding the different possibilities.

In marked contrast to the acute case, the x-ray in these conditions show periostitis, bone proliferations and sequestra, in the absence of sequestrum a very important point is an area of rarefaction and radiolucency, even though very small, however, the entire area of involvement may extend a considerable distance along the diaphysis. In fact, my clinical and operative experiences have shown me that the area of involvement at the time of operation is always about one-third more than revealed by the x-ray and physical examinations.

The Treatment of Chronic Osteomyelitis

The treatment of chronic osteomyelitis requires great skill and judgment. Considerable skill may be required to locate the central abscess within the bone cavity by the x-ray, often the bone has become so eburnated that it is entirely obscured, especially is this true in the sclerosing type or even in the so-called Brodie abscess. One's judgment is again called into play in handling and diagnosing this type of case.

First, no case of chronic osteomyelitis should be operated upon unless there is something definite to be gained by the operation. Second, the radical operation necessary in the majority of cases should be done during the quiescence period.

In addition to the proper surgical procedure necessary, one must bear in mind the correction of existing deformities by whatever means that may be indicated. This is just as important as any of your surgical treatment.

The surgical procedure which I have adopted in these cases has been according to the method advocated by Dr. H. Winnett Orr of Lincoln, Nebraska. Quoting from him as follows:

1. "Make a fairly large incision over the infected bone area. Spread apart the skin, muscles, fascia, and periosteum just far enough to afford access to the diseased area and no farther.

2. Chisel a window into the affected bone area large enough so that all diseased bone may be removed and so that there are no overhanging edges of bone over the diseased area. (Less extensive in acute cases).

3. Clean out the diseased area gently with a curette or gouge, being careful to refrain from unnecessarily damaging the tissues undergoing repair.

4. Dry the wound and wipe out with 10 per cent iodine followed by 95 per cent alcohol.

5. Pack the entire wound wide open, but not tightly with a sterile petrolatum gauze pack. Cover this with a dry sterile pad and bandage on.

6. Now perform any reasonable forcible manipulation necessary to place the parts in

correct anatomical position for splinting (abduct the arm to 90 degrees in humerus cases; dorsiflex and supinate the hand in forearm and wrist cases; dorsiflex the foot to a right angle with the leg, in leg and foot cases, etc.)

7. Apply a plaster cast so that the parts are thoroughly immobilized in comfortable and correct position (additional weight and pulley traction, Balkan frame, or even ice tongs or bone pins may be used in these infected bone lesions associated with fractures and old fracture deformities which are being corrected at the same time as the clean up operation.) It may be said that it is in the latter cases that some of the most gratifying results may be obtained by this method.

8. Finally, the cast is not to be split nor are windows to be cut in the cast until the wound dressing becomes necessary. And the wound is not to be dressed at all unless there is a rise of temperature or other signs of acute sepsis. As a rule, no dressing is necessary except on account of odor, and this may not be required for several weeks. In a majority of cases the patient treated by this method will go through to complete healing with a few dressings at intervals of from ten days to four weeks.''

In adopting and considering the technique of treatment by drainage and rest advocated by Dr. Orr, we must realize it is a radical departure from the older methods, but it certainly has given the desired results.

It is important to emphasize the points in this treatment, that neither closure of the wound by stitches, nor tube drainage of any kind is indicated or used.

The rubber tube drains and Dakin irrigations as advocated and used heretofore not only irritate the tissue as any other foreign body will do, but serves as an inlet or carrier for infection. Too much emphasis cannot be made upon the use of plaster splints on these limbs following the operation.

Before closing, I wish to call your attention to the Aluminum Potassium Nitrate solution treatment as advocated by Dr. Max Thorek of Chicago. I am now trying it out on a series of ten cases with gratifying results. I also wish to emphasize the importance of autogenous vaccine treatment in connection with my cases. In every case, I secure a culture from the abscessed area in the bone and submit it to the laboratory for proper preparations for a vaccine to be given as follow-up treatment. My experience from its use has made me a strong advocator of its use.

CONCLUSIONS

1. Acute osteomyelitis should be diagnosed within 48 hours of the onset in the average case.

2. We should never wait for acute manifestations, such as redness, swelling or positive x-ray findings to make the diagnosis.

3. Operate every case early with adequate drainage.

4. The prognosis will depend upon early diagnosis and proper treatment, influenced by the virulence of the offending organism.

5. The adoption of the Orr method of drainage and rest cannot be overly emphasized.

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DISCUSSION

W. F. SMITH, Little Rock: I enjoyed this paper and I think that you all have. There is one or two points I wish to emphasize. One that I think of prime importance is early diagnosis. You have a patient come to you with a pain near a joint and a history of having fallen. There are no objective signs. Of course, the white blood count may be large and usually is, with a high poly. count. Early recognition of osteomyelitis and prompt and energetic interference is necessary, bearing in mind that any tissue supplied by blood vessels and nerves is subject to infection and this applies equally as well to the bone as the soft tissues. If you wait, as the doctor said, until nature drains it, you are going to have a condition that is going to be a long time in yielding to treatment.

The other point is that the tuberculous condition invades the joint and the osteomyelitis the shaft of the bone. If you just keep that point in mind, it will probably save you a great deal of trouble and be beneficial to the patient.

I have enjoyed the paper and also the presentation of the lantern slides.

DR. I. FULTON JONES, Fort Smith: There is just one topic in Dr. Carruthers' paper that I do not believe has been sufficiently emphasized, acute osteomyelitis. Here we have the young child, who is awakened in the middle of the night with pain in the leg, a chill and high fever. As Dr. Carruthers states, it is treated for rheumatism and everything else. When this child is brought into the hospital the first thing that the doctor wants to do is to have an x-ray made. The point that I want to bear home to you is the fact that this patient should be operated upon first and x-rayed later. You should make your diag-

nosis of acute osteomyelitis before there has been sufficient destruction of bone to show in a roentgenogram. I thank you.

DR. JOE F. SHUFFIELD, Little Rock: I wish to express my appreciation of Dr. Carruthers paper. He has presented to us a well prepared and timely theme.

I wish to make one point in differentiating acute osteomyelitis from acute arthritis, when acute arthritis is present the joint is semi-flexed and swollen, the patient will not bend the joint and will not permit anyone else to bend the joint, but in acute osteomyelitis motion in the adjacent joint is not painful and the joint not swollen. The patient frequently refuses to bend the joint but can be persuaded to move it and will often permit you to do passive motion after he sees motion is not painful, and a central point of tenderness can be located in the ephyceal region and not in the joint as in acute arthritis.

Very, very thorough drainage in acute osteomyelitis should be done at once as the Doctor has suggested, it is most hazardous to wait because of the high mortality and the long morbidity. If operated upon early, the patient can often return to work in from three to six weeks, but if operation is delayed and the condition is allowed to become chronic the patient may never return to work because of deformed and crippled end results, if not death.

Concerning treatment of chronic osteomyelitis, these patients are frequently in very bad condition, due to the long illness and absorption from the poorly drained and infected region. Patients should be carefully prepared for the extensive surgery which is necessary and everything should be done to prevent the inevitable great shock at the time of operation, patients, generally, should not be operated upon until observed for a few days, during this period of observation they should be x-rayed, then general physical condition should be built up, overcome the deformities caused by muscular contractions by traction, establish better drainage if needed also transfusions and infusions before and after operation if needed.

Last, but not least apply a cast as soon as deformity is overcome, without an anesthetic. Make cast go well above and well below the joints on either side of the infected bone, reinforce this cast on each side of the area to be operated upon cut large window between the reinforcements over the operative field. The patient will now rest more comfortably, eat more and get in condition for surgery much quicker.

The operation can be performed through this window just as easily as if the cast was not on and will prevent many pathological fractures during surgery and if you do have to remove all bone in certain areas the part is well supported and held in position by your cast.

By such preparation and cast with a window almost one-half the time is saved at the operating table, including anesthetic which is a very big factor in preventing shock.

DR. CARRUTHERS, in closing: I thank you very much for your discussion. There is just one thing I would like to leave with you, and that is that there are no acute manifestations of this disease, as a rule, appearing upon the surface of the affected part, one is too inclined to want to wait until swelling, redness and other acute manifestations are shown before you are willing to diagnose the case what it really is. If you will bear in mind, the paramount thing about it, that it is acute in its onset, fulminating in character, with high fever and localized pain over the affected area and that the condition is one for immediate surgery, so get your patient to the hospital and institute drainage at once. You will save many a child, perhaps, from being a cripple for the remainder of its life.

Book Reviews

Disease of the Skin—A Text-Book for Practitioners and Students. By George Clinton Andrews, A. B., M. D., Associate Professor of Dermamatology, College of Physicians and Surgeons, Columbia University; Consulting Dermatologist and Syphiliologist to Tarrytown Hospital; to St. John's Hospital, Yonkers; to Grassland's Hospital; and to the Broad Street Hospital, New York. 988 illustrations. Published by W. B. Saunders Company, Philadelphia.

This book describes the knowledge we have up-to-date on the principles of dermatology.

In spite of the fact that many books have been published on this subject, this particular one has many attractive features. Especially in the first ten chapters that include the anatomy, etiology, pathology, symptomatology, principles of treatment, and the proper technic in the use of x-rays, radium and ultra-violet light.

The author presents in separate chapters the diseases due to Physical Causes; Chemical Irritants; Fungi; Bacilli; Animal Parasites; Congenital Origin and Tropical Diseases of the Skin.

Eczema and allied conditions as well as syphilis, and benign and malignant neoplasms are thoroughly described.

DOCTOR NEEDED

Opportunity for good general practitioner; it is 22 miles either way to a doctor except across a mountain.

Anyone interested will please communicate with T. W. HALL, Blue Ball, Arkansas.

FOR SALE. One Alpine, ultra-violet ray, sunlamp. Junior model. Manufactured by Hanovia Chemical Company. Used only in private home. Globe has burned less than ten hours. Model suitable for doctors office. Price, $125.00. Write Henry H. Jones, 815 Rector Building, Little Rock.

THE JOURNAL
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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

DEVILS, DRUGS AND DOCTORS

With the above title, Dr. Howard W. Haggard, Associate Professor of Applied Physiology in Yale University, has written a book of the best-seller class that is now in its thirteenth printing. In subject material the book deals with a considerable number of the more important incidents, beliefs, practices, and discoveries occurring in medical history.

On January 25, there was begun a series of radio addresses by Dr. Haggard with the same title and covering much the same subject material. These addresses are sponsored by the Eastman Kodak Company of Rochester, N. Y. and dedicated to the physicians, surgeons, and dentists of America. Forty-two stations of the Columbia Broadcasting System are used, station KMOX of St. Louis being the station most convenient for Arkansas listeners. The series will continue through 1931, and, should the talks be of sufficient interest, the programs will be continued through a period of two and possibly three years.

This series of addresses will probably prove to be the most constructive piece of medical publicity ever attempted. As such it should have the support of the medical profession of America. To this end it is suggested that the physicians of Arkansas show an interest in the programs by listening to them, by telling their patients and friends about them, and by writing commendatory letters about them to the Eastman Kodak Company.

Each of the addresses will be printed on perforated sheets suitable for loose-leaf binding. Copies will be sent to anyone writing to the Kodak Company for them. The complete series of talks in printed form will give a comprehensive outline of medical history, a valuable addition to any physician's library.

The standing of Professor Haggard and the Eastman Kodak Company are sufficient for assurance that the highest ethical standard will be maintained—*D. A. Rhinehart.*

BASIC SCIENCE LAW

Defined by

HON. PETER DEISCH, *Director Medical Legislation, Arkansas Medical Society*

It would seem to be reasonable even to a dull mind that the State needs the Basic Science Law, a law which requires that a person who handles a complicated machine like

the human body should know as much about his job, as we expect of the auto mechanic when he undertakes to tinker with our cars. After all, what are the basic sciences described in the law? First, anatomy; how the human machine is made; then physiology, how it operates; next, chemistry, the elements of which it is composed, and which affect it; then bacteriology, the enemies that prey upon it, the friends that help it; and lastly pathology, what may be wrong with it.

If we require this elementary knowledge of the man at the garage who undertakes to repair our cars, or the engineer who runs a thing so crude as a train, simple machines, both, as compared with the delicate mechanism with its millions of parts which compose the machine which is our body, we should certainly expect as much of the doctor who undertakes to keep the human machine in repair.

The Basic Science Law is after all but a minimum expression of basic intelligence on the part of the people of this State, and of all States where it is the law, an expression of their determination to protect themselves from incompetence and ignorance where their most precious possession, health, is concerned.

Abstracts

INFECTIOUS RECURRENCE AND MUCOCUTANEOUS RELAPSE IN SYPHILIS

The study made by John H. Stokes, John H. Besancon and Arthur G. Schoch, Philadelphia (Journal A. M. A., Jan. 31, 1931), covers 60 relapses, in 56 patients among 2,439 syphilis cases, of which 911 were in the primary or secondary stage. Reinfection has usurped the place of early relapse in syphilis in the interest of syphilologists during the past decade and in the literature, with the result that the comparatively much more important public health issue, that of infectious relapse in syphilis, has been submerged. Aside from the important possibilities of confusion between relapse and reinfection, which make differential diagnosis difficult, possible reinfection constitutes only 0.16 per cent of the material of this study, while relapse is fourteen times as frequent (2.2 per cent). Practical maxims for the physician who wishes to treat early syphilis so as to prevent infectious cutaneous and mucosal relapse with consequent dissemination of the disease from an uncontrolled and usually unrecognized source include the following: (a) The concept of abortive cure by short courses should be abandoned, no matter how early the patient may come under treatment. (b) No less than twenty injections of an arsphenamine, and more if possible, preferably in one or two courses, and an equivalent amount of heavy metal, without rest intervals, should be given, in an early case, to control infectiousness. (c) Cutaneous and mucosal relapse is detected by actual physical examination with special emphasis on the mouth, anus and genitalia, rather than by the Wassermann test. One should examine especially the lips, penis, scrotum and vulva. (d) Positive serologic tests may warn of infectious relapse and confirm the diagnosis; but, since they cannot be frequently applied, physical examination and instruction of the patient in self-recognition of infectious lesions are the more important approaches. (e) Negative serologic tests are not proof of non-infectiousness, immediate or future. A negative Wassermann or Kahn test should not deceive physician or patient into relaxing precautions. Treatment and time are the chief preventives of infectiousness. (f) Serologic tests and stripped physical examinations, to be of value in detecting relapse, should, if anything, be more frequently made after treatment is completed and the patient is put on observation, than during treatment itself. The opposite is common practice. This applies especially to the first two or three years of the disease. (g) Since potentially infectious relapse occurs overwhelmingly in the first two years of early syphilis, sexual relations and intimate contacts without absolute protection should be allowed only while the patient is under actual arsphenamine treatment. The duration of non-infectiousness when treatment is stopped before the twelfth injection of arsphenamine may not exceed one month.

ADDISON'S DISEASE

Leonard G. Rowntree, Carl H. Greene, Rochester, Minn., and Wilbur W. Swingle and J. J. Pfiffner, Cold Spring Harbor, N. Y. (Journal A. M. A., Jan. 24, 1931), discuss their results in the treatment of Addison's disease, with various suprarenal preparations. Fifty-seven patients have been subjected to the so-called Muirhead treatment. Thirty-two cases are reported as temporarily benefited, and in twenty of these the immediate re-

sults were excellent. In some cases this period of improvement lasted for weeks, in others for months, and in ten cases for periods of from three to seven years. In contrast to this, the treatment was entirely without beneficial effect in twenty-five cases. The latter patients usually did not tolerate the epinephrine well, complained of increasing weakness and trembling and of nausea and vomiting, and in these cases there was a lowering, rather than an increase, in blood pressure. In general, with the Murihead treatment, half of the patients showed some benefit, a third responded with results that were considered excellent, and a sixth were living after three years. The results of the Muirhead treatment may well be likened to those of treatment with roentgen rays or radium in carcinoma. With the application of radium marked temporary improvement is common, and remissions last for weeks, months and occasionally for years. And just as radium is curative in many cases of carcinoma of the cervix, so the Muirhead treatment is effective in certain types of Addison's disease. Radium is regarded usually as paliative in carcinoma; the Muirhead treatment is also palliative, but like radium it may also closely approach a curative measure. Various other products, prepared from the suprarenal gland or closely related to epinephrine either in their chemical structure or pharmacologic action, have been tried in the treatment of Addison's disease, including ephedrine and the cortical hormone of Swingle and Pfiffner. The effect of this last named preparation was observed on six patients. The amount of cortical hormone available for clinical use has been small and its delivery irregular, so that as yet it has not been possible to make a complete clinical study. The results to date, however, warrant this preliminary report. Their results convince the authors of the efficacy of this cortical hormone. The disappearance of anorexia, the increase of appetite to the point of hunger, the gain in weight, and the definite euphoria were striking in all cases. As long as the preparation could be administered, the results were all that could be desired. However, the supply of the preparation has been extremely meager and intermittent, so that it has not been possible to observe the results following consistent dosage and continued administration. Moreover, the first preparation used was not free from epinephrine and was irritating locally. The later supply, however, was almost, if not wholly, free from epinephrine was suitable for intravenous administration and was much less irritating when injected subcutaneously. Under ordinary conditions, the intravenous method of administration would seem to be preferable. The usual dose is from 10 to 20 cc. daily in divided doses but 20 cc. has been given to a patient at one time without any undesirable reaction and as much as 100 cc. has been given intravenously to dogs without any untoward effects. The immediate results in a crisis are excellent. The disease, however, is chronic, and it will be necessary for several years to elapse before a final appraisal can be made of the value of this cortical hormone in Addison's disease. The first three patients had previously been under the Muirhead treatment and all three stated that they felt better when this cortical hormone was given than with any treatment which they had received before. The return of appetite and the increase in weight have been the most striking effects witnessed by the authors in their entire experience with this disease. They are inclined to believe that the cortical harmone is as effective in meeting the crisis of Addison's disease as is insulin in diabetic coma. Although somewhat less prompt and dramatic in action, the results are almost equally striking. With unlimited supply of the hormone, it is possible that patients may be completely rehabilitated.

Personal and News Items

Dr. J. R. McDaniel, Jr., of Blytheville has moved to Las Vegas, Nevada.

Dr. C. T. Morris of Blytheville has moved to Shreveport, Louisiana.

Dr. A. J. Harrison of Lowell has moved to Springdale.

Dr. Olin West, Secretary, American Medical Association, contributed to the Arkansas Red Cross Relief Fund.

MARRIED: Dr. W. J. Robinson of Portia to Miss Belle Ketchem of Imboden, February 4, 1931.

The Garland County-Hot Springs Medical Society elected Dr. J. S. Stell, President for 1931, succeeding Dr. Geo. B. Fletcher. Dr. G. A. Hebert was re-elected secretary.

Dr. A. G. Sullivan of Hot Springs presented a paper on "Acute Coronary Occlusion," before the Pulaski County Medical Society, February 2.

A meeting of the Ouachita County Medical Society was held Thursday, February 5, at the Orlando Hotel in Camden, which was designated as "Ladies' Night." The following program was rendered: Address—Mrs. J. W. Meek, Camden; Address—Dr. E. E. Barlow, Dermott; Address—Dr. Robert G. Douglas, Shreveport; Address—Senator Pike Hall, Shreveport.

At a meeting of the Columbia County Medical Society, held January 13, 1931, the following officers were elected: President, J. J. Baker, Magnolia; Vice-President, W. P. Cooksey, Magnolia; Secretary-Treasurer, G. F. McCleod, Magnolia; Delegate, W. H. Horn Taylor; Alternate, H. K. Carrigan, Magnolia.

The Arkansas Hospital Association met in Little Rock, February 3, at the Baptist State Hospital. More than twenty-five hospitals were represented.

At the morning session the following officers were elected: Lee C. Gammill, Superintendent of the Baptist State Hospital, President; Dr. Charles S. Holt, re-elected Vice-President; Miss Carolyn Snyder, Superintendent of Trinity Hospital, Secretary-Treasurer.

A Legislative Committee was appointed as follows: Mrs. John Green, H. E. Spitzberg, Dr. M. D. Ogden, Dr. C. S. Holt, Dr. W. A. Laws, Dr. W. F. Smith, Dr. R. L. Smith and Mrs. O. M. Brooks.

Dr. C. W. Garrison, State Health Officer, addressed the meeting in executive session.

The next meeting of the association will be held at Texarkana, in connection with the meeting of the Arkansas Medical Society in April.

Auxiliary Notes

(Reported by Mrs. Marcus T. Smith, Publicity Secretary)

The Woman's Auxiliary of the Faulkner County Medical Society held its January meeting with Mrs. H. C. Brooke on Donaghey Avenue. Mrs. J. W. DeJarnatt read an interesting paper on "Mental Science and Health" after which plans for assisting in welfare work were made. At the social hour the hostess served light refreshments.

The Woman's Auxiliary of the Garland County Medical Society was entertained at the home of Mrs. Charles Garratt, with Mrs. Gaston Hebert, Mrs. W. L. Porter and Mrs. Loyd Thompson assisting. During the business session, presided over by Mrs. Geo. B. Fletcher, President, the milk fund committee reported that 480 quarts of milk were being given each month for 23 children in four families. The auxiliary members have made and distributed twelve layettes and has twelve on hand, to be given when needed.

The program presented included a vocal selection by Mrs. T. M. Brown, and an interesting book review of "A Day Out of a Doctor's Life," by Mrs. J. S. Stell. The roll call was answered with personal experiences of a doctor's wife. Mrs. George B. Fletcher gave an original and clever poem on "Faith."

A dainty refreshment course was served at the close of the meeting. Approximately thirty attended.

The Woman's Auxiliary to the Pulaski County Medical Society entertained at luncheon Friday, January 9, at the Hotel LaFayette, for the wives of the Fellows of American College of Surgeons. Mrs. R. C. Kory, program chairman, presented the guests, after which Mrs. Anderson Watkins, President of the Auxiliary, introduced the members of her organization. Mrs. Pat Murphey gave the address of welcome to which Mrs. James A. Hill of Houston, Texas, responded. Mrs. Chas. Oates, State President, and president-elect of the Auxiliary of the Southern Medical Association, gave a talk on work accomplished in the State and of the outstanding features of the State program. Each visitor gave a brief account of the auxiliary in her own city and discussed the work members are doing. The out-of-town guests were: Mesdames Gordon B. New, Rochester, Minn., James A. Hill, Houston, Texas, W. R. Thompson, Fort Worth, Texas, J. S. Jenkins, Pine Bluff, R. C. Dorr, Batesville and W. W. Wells, Oklahoma City.

News Items

RESOLUTION ADOPTED BY THE UNION COUNTY MEDICAL SOCIETY ENDORSING BASIC SCIENCE LAW

Whereas, it has come to our knowledge that certain forces are at work in the State, attempting to cause a revision of, or repeal of

the law governing medical legislation in this State and are trying to influence public opinion and thus influence the Legislature now in session, to either repeal or modify the Basic Science Law.

We believe that such a modification would lower the medical standards and allow unscrupulous, uneducated men to obtain license and practice the healing art within the State and otherwise impose upon an uninformed public.

Whereas, we believe the Basic Science Law is just and fair and that its requirements are no more than should be met by every man who expects to go in the homes of the people of this State to assist the mothers in their most trying hours, to assist in making little folks who are sick, well, and teach them the rules of how to stay well and we feel that the men who are to hear the intimate secrets of your wives and daughters regarding themselves, cannot be too well informed on all matters and must be men of the highest type and standard of manhood and that the Basic Science Law is good, wholesome and its requirements are only such as every man should be able to meet who expect to devote his future life to the service of sick and suffering mankind.

That there are present at this, the regular meeting of the Union County Medical Society, twenty-three members, who unanimously endorse this resolution.

Now, Therefore, Be It Resolved, that the twenty-three members present do condemn any effort to interfere with the present medical law and we do hereby call upon all men who have the interest of the people at heart, and we respectfully urge our representative Mr. Oliver and our Senator, Mr. Purkins to oppose any such action and to lend their good office and influence.

Respectfully submitted,

Signed, F. O. Mahony, *Chairman.*

A. D. Cathey	Ernest W. Prothro
J. W. Slaughter	J. W. Fleming
W. T. Ginn	D. E. White
J. K. Sheppard	G. D. Murphy
M. V. Russell	H. A. Murphy
E. J. Munn	S. J. McGraw
T. C. Moody	J. G. Mitchell
G. C. Engle	F. L. Irby
L. L. Purifoy	J. A. Moore
Henry Ritterman	T. J. Bush
J. B. Wharton	J. H. Slaughter

D. A. Dickerson

ARKANSAS BASIC SCIENCE LAW

Act No. 147—H. B. No. 506

AN ACT to establish a State Board of Examiners in the basic sciences, to provide for its organization and powers, to provide that certification by such Board be a prerequisite to eligibility for examination for license to practice the healing arts; to define the healing arts, and for the better protection of the public health in the State of Arkansas.

Be it enacted by the general assembly of the State of Arkansas:

Section 1. BASIC SCIENCE CERTIFICATE REQUIRED. No person shall be eligible for examination or permitted to take an examination for a license to practice the healing art or any branch thereof, or granted any such license, unless he has presented to the licensing board or officer empowered to issue such a license, a certificate of ability in anatomy, physiology, chemistry, bacteriology and pathology (hereinafter referred to as the basic sciences), issued by the State Board of Examiners in the basic sciences.

Sec. 2. THE HEALING ART DEFINED. For the purposes of this Act, any license authorizing the licentiate to offer or undertake to diagnose, treat, operate on, or prescribe for any human pain, injury, disease, deformity, or physical or mental condition is a license to practice the healing art.

Sec. 3. BOARD OF EXAMINERS IN THE BASIC SCIENCES. The Board of Examiners in the basic sciences shall consist of five persons to be appointed by the Governor, and the Superintendent of Public Instructions who shall be a member ex-officio. Every member shall serve until his successor is appointed and qualified. The members of the Board shall be selected because of their knowledge of the basic sciences aforesaid. No member of the Board shall be actively engaged in the practice of the healing art or any branch thereof. No member of the faculty of any medical school shall be eligible to appointment as a member of said Board. The members shall be appointed one for two years, one for three years, one for four years, and one for five years and one for six years from the date of their respective appointments. Upon the expiration of the terms of any member, the Governor shall fill the vacancy by appointment for a term of six years. Upon the death, resignation or removal of any member, the Governor shall fill the vacancy by appointment for the unexpired term. The Superintendent of Public Instruction shall supervise all examinations conducted by the Board, and the office of said Board shall be in the office of said Superintendent.

Sec. 4. ORGANIZATION OF BOARD; ELECTION OF OFFICERS, SEAL, RULES, COMPENSATION. The Board shall meet and organize as soon as practicable after appointment. It shall have power to elect officers, to adopt a seal, and to make such rules as it deems expedient to carry this Act into effect. The Board shall keep a record of its proceedings which shall be prima facie evidence of all matters contained therein. Each member of the Board shall receive ten dollars per diem and actual expenses, when actively engaged in the discharge of his duties. The compensation of the members and the other expenses of the Board shall be paid out of the fees received from applicants. The treasurer of the Board shall give such bond, running in favor of the State, as the State Treasurer shall determine.

Sec. 5. FEES PAYABLE BY APPLICANTS. The fee for examination by the Board shall be ten dollars. The fee for re-examination within any twelve months period as hereinafter provided shall be five dollars, but the fee for re-examination after the expiration of twelve months shall be the same as the original fee. The fee for the issue of a certificate by authority of reciprocity, on the basis of qualifications as determined by the proper agency of some other State shall be five dollars. All fees shall be paid to the Board by the applicant at the time of filing application. The Board shall pay all money received as fees into the State Treasury, to be placed in the special fund to the credit of the Board. The treasurer shall pay out of such fund all expenses incurred by the Board, on vouchers signed by the President and the Secretary of the Board.

Sec. 6. EXAMINATIONS. The Board shall conduct examinations at such times and places as it deems best, having due regard to the times and places of the examinations held by the several professional examining boards authorized to issue licenses to practice the healing art in the State of Arkansas. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability and skill in the basic sciences. The examination shall be conducted in writing. If the applicant receives a credit for seventy-five per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than seventy-five per cent in one subject and receives seventy-five per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, upon application and the payment of the prescribed fee; but he shall be required to be re-examined in all branches. If the applicant shall receive less than seventy-five per cent in more than one subject, he shall not be re-examined within the period of one year next following his original examination nor unless he presents proof satisfactory to the Board of additional study in the basic sciences sufficient to justify re-examination.

Sec. 7. REQUIREMENTS FOR CERTIFICATE. No certificate shall be issued by the State Board of Examiners, in the Basic Sciences, unless the person applying for a certificate submits evidence satisfactory to the Board that (1) he is not less than twenty-one (21) years of age; (2) he is a person of good moral character; (3) he was graduated by an accredited high school or similar grade or possessed education qualifications equivalent to those required for graduation by such an accredited high school, before he began the study of the basic sciences as shown by passing the examination given by the Board, as by this Act required.

Sec. 8. RECIPROCITY. The State Board of Examiners in the Basic Sciences may in its discretion waive the examination required by Section 7 when proof, satisfactory to the Board, is submitted, showing that the applicant has passed an examination in the basic sciences before a board of examiners in the basic sciences or a board authorized to issue licenses to practice the healing art, in another State, when requirements of that State are, in the opinion of the Board, not less than those provided by this Act.

The provisions of this section shall apply only to examinations conducted by the boards or officers of States that grant like exemption from examination in the basic sciences to persons now legally entitled to practice the healing art.

Sec. 9. APPEAL FROM BOARD'S DECISION. Any applicant who has been denied examination by the Board within thirty days after such denial may appeal to the circuit court for the county in which the Board has its office; and such court shall upon such appeal inquire into the cause of such denial. If in the opinion of the court admission to examination was refused without just cause, the court may order the Board to examine the applicant. Notice of an appeal from the denial of the Board of the right to examination may be served upon any member of the Board by leaving with him or with any adult member of his staff or household, at his usual place of business or abode, an attested copy thereof within thirty days after said Board has notified the applicant of its refusal to examine him. Hearing of such appeals shall proceed in accordance with such rules as the district court may determine.

Sec. 10. CERTIFICATES AND LICENSES VOID. Any basic science certificate and any license to practice the healing art or any branch thereof which is issued contrary to this Act shall be void. A Board which has issued a license by virtue of a void basic science certificate shall revoke or cancel such license. The procedure for such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued for the cancellation or revocation of licenses generally. The certificate issued to any person by the State Board of Examiners in the basic sciences shall be automatically revoked by the revocation of any license issued to such person to practice the healing art or any branch thereof.

Sec. 11. PRACTICE WITHOUT BASIC SCIENCE CERTIFICATE FORBIDDEN. Any person who shall practice the healing art or any branch thereof without having obtained a valid certificate from the State Board of Examiners in the Basic Sciences, except as otherwise authorized by this Act, shall be fined not more than one hundred dollars or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 12. FRAUDULENT CERTIFICATES FORBIDDEN. Any person who shall obtain or attempt to obtain a basic science certificate by any dishonest or fraudulent means, or who shall forge, counterfeit, or fraudulently alter any such certificate, shall be fined not more than five hundred dollars, or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 13. FRAUDULENT LICENSES FORBIDDEN. Any person who shall obtain or attempt to obtain a license to practice the healing art or any branch thereof from any board authorized to issue any such license, without presenting to said licensing board a valid certificate issued by the State Board of Examiners in the Basic Sciences, as in this act required, shall be fined not more than five hundred dollars or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 14. ISSUE OF FRAUDULENT LICENSES FORBIDDEN. Any person who knowingly issues or participates in the issue of a license to practice the healing art or any branch thereof in any person who has not presented to the licensing board a valid certificate from the State Board of Examiners in the Basic Sciences, or to any person who has presented to such licensing board any such certificate obtained by dishonesty or fraud, or any forged or counterfeit certificate.

shall be fined not more than five hundred dollars, or imprisoned not more than twelve months, or both, in the discretion of the judge.

Sec. 15. FEES PAID UNAUTHORIZED PRACTITIONERS RECOVERABLE. Any money paid out by any person as compensation for services rendered in the practice of the healing art or any branch thereof to any person not validly licensed to practice such healing art or branch, when the payor did not know that such person was not validly licensed so to practice, may be recoverable by the person who has paid such money by a suit instituted within two years from the date when such fee or compensation was paid.

Sec. 16. ENFORCEMENT. The State Board of Examiners in the Basic Sciences and the various boards authorized to issue licenses to practice the healing art or any branch thereof shall investigate any supposed violation of this act and report to the proper county attorney all the cases that in the judgment of such board warrant prosecution. Every police officer, sheriff and peace officer shall investigate all supposed violations of this Act and apprehend and arrest all violators thereof. It shall be the duty of the attorney general and of the several county attorneys to prosecute violations of this Act.

Sec. 17. On or before the first day of March in each year, the secretaries of the several examining boards shall certify to the Secretary of State, under the hand and seal of the President and Secretary of the particular examining board, a list of all persons registered with said board for the current year. The Secretary of each of the several examining boards of this State shall within 60 days after any examination conducted by his examining board, certify in writing to the Secretary of State a list of all persons admitted or licensed by his board to practice the healing art in this State, and whose names have not been previously certified to the Secretary of State, or any other agency, provided by law in the then current year. Within thirty days after receiving from the Secretary of the several examining boards any of the lists of persons he shall cause such list to be printed and a copy thereof to be sent to the sheriff of each county, and to the prosecuting attorney of each district, who shall keep on file in his office for the inspection of the public, such list.

Sec. 18. Exceptions. This act shall not be construed as applying to dentists, nurses, midwives optometrists, chiropodists, barbers, cosmeticians or Christian Scientists, practicing within the limits of their respective callings; nor to other persons licensed to practice the healing art or any branch thereof in this State when this Act takes effect; nor to persons specifically permitted by law to practice without licenses, practicing within the limits of the privileges thus granted them; not to the sale, manufacture, or advertising of drugs, medicines, household remedies, chemicals and household preparations, provided that the vendor, maker or advertiser refrains from any attempt to diagnose.

Sec. 19. SAVING CLAUSE. No provision of this act shall be construed as repealing any statutory provision in force at the time of its passage with reference to the requirements governing the issuing of licenses to practice the healing art or any such branch thereof; but any board authorized to issue licenses to practice the healing art or any branch thereof may in its discretion accept certificates issued by the Board of Examiners in the Basic Sciences in lieu of examining applicants in such sciences or may continue to examine applicants in such sciences as heretofore. The unconstitutionality of any part of this Act shall not be construed as invalidating any other part thereof.

Sec. 20. SHORT TITLE. This Act may be cited as "Basic Sciences Act, 1929."

Sec. 21. DATE OF TAKING EFFECT. This Act shall take effect and be in force from and after its passage and approval by the Governor.

Approved March 14, 1929.

Obituary

RUNYAN, JOSEPH PHINEAS—Dr. J. P. Runyan, aged 62, 1902 Schiller Avenue, Little Rock, died suddenly, February 2, 1931. Death followed an illness of four months, but was entirely unexpected. He was believed to be on the road of recovery.

During an operation September 28, Dr. Runyan pricked a finger with a needle. Septicaemia developed and his condition remained critical for many days. However, he rallied, but due to his weakened condition, heart disease developed. Death was attributed to a heart attack.

Dr. Runyan was born in Columbia County, January 29, 1869. He graduated from the Medical College of Tulane University in 1890, and began the practice of medicine in Pine Bluff. Moved to Little Rock in 1900, and soon afterwards formed partnership with the late Dr. Chas. R. Shinault.

Dr. Runyan was president of the Arkansas State Board of Health from 1904 to 1906. From 1901 to 1904 he was secretary of the Arkansas Medical Society, and in the latter year was elected to the presidency. He was dean and president of the old College of Physicians and Surgeons from its organization in 1906 until it was merged with the Medical Department of the University of Arkansas in 1912.

He married Miss Callie Jackson at Waldo, June 5, 1895.

For many years he was a member of the Board of Directors of both Ouachita and Central Colleges. He was a member of the Second Baptist Church of which he was a deacon. At one time he was President of the Civitan Club of Little Rock. He was President of the Young Men's Christian Association at the time the new "Y" building was erected. He also served as President of the Little Rock School Board, and for many years was President of the Baptist State Board.

Dr. Runyan is survived by his wife, a brother, I. O. Runyan, both of Little Rock; five nephews, Harry Runyan of Denver Col., Benjamin and Thurston Runyan and Carl McKnight of Little Rock and George McKnight of Sweetwater, Texas, and four neices, Mrs. Ola Miller and Mrs. Lena King of Sweetwater, Mrs. R. J. Dodson of Blytheville and Mrs. James Campbell of Little Rock.

KLEIN, NETTIE—Dr. Nettie Klein of Texarkana, aged 66; one of the most prominent women physicians in the South and a pioneer member of the Texarkana Hospital Staff, died February 5, 1931, of cerebral hemorrhage.

She was born in Woodville, Mississippi, and came to Texarkana in 1881. She specialized in pathology and dermatology. She represented the Federation of Women's Clubs at the international conference on tuberculosis in Washington a few years ago.

She is survived by three sisters, Mrs. Ray Eberson and Mrs. R. H. Kuhl of Texarkana and Mrs. A. E. Schwab of New York and a brother, P. J. Morris of New York.

County Societies

BOONE COUNTY

(Reported by W. H. Poynor, Sec.)

The Boone County Medical Society met in Harrison, February 3rd. The meeting was called to order by President Evans. Members present: Evans, Blackwood, Fowler, Johnson, McCurry, Gladden, Watkins, Moore and Poynor.

Dr. W. T. Moore, who held his membership in Searcy County, was elected a member of this county.

Dr. W. A. Butt of Green Forest was a visitor.

"Fetal Death at Seven Month's Gestation" was the subject of a paper presented by J. H. Fowler, which elicited general discussion.

The Society went on record as being opposed to the enactment of any law which conflicts with the present Basic Science law.

The following officers were elected:

President, W. T. Moore, Everton; First Vice-President, D. L. Owens, Harrison; Second Vice-President, J. G. Gladden, Western Grove; Third Vice-President, J. H. Fowler, Harrison; Secretary-Treasurer, W. H. Poynor, Harrison; Delegate, J. H. Fowler, Harrison; First Alternate, D. L. Owens, Harrison; Second Alternate, D. K. McCurry, Green Forest; Third Alternate, J. G. Gladden, Western Grove.

FAULKNER COUNTY

(Reported by Marcus T. Smith, Sec.)

The Faulkner County Medical Society met in Conway, January 15, at the office of the Secretary, Dr. Smith. Members present: Westerfield, Smith, Fraser, Downs, Cureton, Muse, Dunaway, McMahan, McCollum and Henderson.

Dr. Wallace L. Britton of Dangerfield, Texas, who has recently located in Conway, was voted a member of the Society.

ST. FRANCIS COUNTY

(Reported by J. O. Rush, Sec.)

The St. Francis County Medical Society met in regular session, Tuesday, January 13, in the Courthouse at Forrest City.

Present: Boggan, Brown, Bogart, Caldwell, McCown, McDougal, Oliver, Powell, Polk and Rush.

The meeting was called to order by the President, Dr. Boggan. Minutes of the December meeting were read and approved.

On motion of Dr. McCown, the annual dues of the Society were fixed at one dollar. It is expected that there will be a meeting each month in the year and every member is urged to attend.

The matter of poor collections, which so seriously affects our physicians, owing to the credit system that has prevailed for so many years, was discussed. It was proposed that physicians in this county render bills for all services every thirty days, with the expectation that same be paid. Some members of the Society have lost practically all that they made last year by putting off collections until everyone else was paid. It was finally decided to postpone final decision of the matter until the next regular meeting and that the secretary advise all physicians in the county, giving them an opportunity to express their views.

The meeting adjourned to meet February 9, at 3:00 p. m.

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Original Articles

ACUTE CORONARY OCCLUSION*

Some Clinical Considerations

Arthur G. Sullivan, M. D., F. A. C. P.
Hot Springs National Park

"The termination of the angina pectoris is remarkable. For if no accident intervene, but the disease go on to its height, the patients all suddenly fall down, and perish almost immediately." So wrote Heberden[1] to the College of Physicians in 1768 in his original communication concerning angina pectoris.

There our knowledge of the clinical entity now known as coronary occlusion rested for 150 years. Angina pectoris was considered a complete syndrome, and sponsored by the influence and persuasiveness of Sir Clifford Albutt was quite generally attributed to stretching of the aorta. To add still further to the confusion the abominable term "anginoid" was coined to refer to nearly any type of pain occurring in the left chest. No attempt was made to distinguish between attacks of angina and those of coronary occlusion.

Thrombosis of the coronary arteries remained a post-mortem diagnosis, a pathological curiosity. In 1910 two Russian physicians, Obratzow and Straschesko,[2] gave the first satisfactory account of the symptoms of coronary occlusion. They reported three cases, in two of which they made the diagnosis clinically and confirmed it post-mortem.

Herrick[3] was first to call attention to the fact that sudden occlusion of a coronary branch was not necessarily fatal. Since then a number of American writers have made valuable contributions, F. M. Smith, Pardee, Longcope, Willius, Robinson, Hermann, Wearn, Libman and Levine among others. In 1926 Hamman[4] gave the best systematic account of the clinical symptoms accompanying coronary occlusion which had been published up to that time. In fact Americans are credited with most of the important work done in developing this clinical entity.

Symptoms of Coronary Occlusion

For convenience of discussion we may classify our cases in the following manner:

1. Cases in which death occurs instantly or in a few minutes after occlusion.
2. Cases in which death occurs a few hours or days after occlusion.
3. Cases in which myocardial insufficiency ensues and death may be delayed for weeks or months or recovery occur.
4. Cases in which the symptoms may be so slight that diagnosis may be suspected but almost impossible to confirm.

The first type is of importance mainly from the standpoint of helping to keep accurate vital statistics.

The second and third types constitute the typical cases. To discuss the symptomatology as logically as possible I have taken the liberty of borrowing in its entirety the grouping which Hamman gives in his splendid article.[4]

1. Immediate symptoms associated with the occlusion.

The outstanding characteristic of coronary occlusion is its sudden onset. Sometimes the patient has had warnings in the form of previous attacks of anginal pain, but not infrequently the attack comes like a bolt from the blue. A second feature which is important when it occurs, in helping to distinguish occlusion from an ordinary anginal attack is that while anginal attacks always occur dur-

*Read before the 55th Annual Session of the Arkansas Medical Society, held at Fort Smith, May 6, 7, 8, 1930.

ing exercise or emotional stress, coronary occlusion frequently occurs while the patient is at rest, not infrequently at night while asleep.

A. Pain: The pain of coronary occlusion is somewhat similar to that of angina. The differences are in its intensity and duration. Anginal pain always ceases on rest or quickly yields to nitrites. The pain of occlusion is continuous, not affected by nitrites, and often is resistant to morphine. The pain is often referred to the epigastrium; there is tenderness, rigidity of the abdominal muscles, nausea and vomiting.

B. Shock: May be profound. Pallor, sweating, rapid feeble pulse and immobility reveal the seriousness of the situation. There is usually a marked drop in blood pressure.

2. Symptoms associated with the myocardial damage.

A. Dyspnoea is the earliest and most constant of symptoms of congestive failure. With pain and shock it forms the cardinal triad of symptoms of occlusion. Aside from its sudden onset there is nothing to distinguish it from the usual dyspnoea. Like the pain, it may vary in intensity in various cases, although both tend to vary inversely in the same patient.

B. Pulmonary edema is almost always present in greater or less degree and ranges from a few crackles at the lung bases to a literal drowning of the patient. It may in these latter cases over-shadow most of the other symptoms and signs.

C. Enlargement of the liver does not need to be elaborated upon. Albuminuria may raise the question of nephritis. If in doubt the blood chemistry will help differentiate. A blood urea reading of 50 mg. or less in the presence of other signs of congestion may be safely considered as largely due to passive congestion of the kidneys and can reasonably be expected to clear up as the cardiac function is restored. The blood creatinine will not show any increase.

D. Cheyne-Stokes respiration needs only to be mentioned. When present it is of bad prognostic significance.

E. The signs elicited by direct examination of the heart are puzzling when observed for the first time. The history and the appearance of the patient have quite possibly suggested a cardiac accident. We are prepared to hear a tumultous cardiac action with all sorts of harsh murmurs. It is a distinct surprise to be unable to see the apex beat or even palpate it. We listen with a stethescope and instead of tumult we can make out the sounds with difficulty. They seem to be coming from a great distance. Gallop rhythm may be present, or the rapid tic-tac rhythm of the foetal heart. Almost any of the arrhythmias may be present, auricular fibrillation, flutter, heart block, pulsus alternans, paroxysms of tachycardia either auricular or ventricular. Ventricular premature contractions or extra-systoles are most common.

4. Occlusion of a coronary branch results in an area of myocardial infarction. Certain signs and symptoms are associated with such infarction. Symptoms associated with the myocardial infarct.

A. Fever and leucocytosis are very commonly found. The temperature may rise within an hour and a half but is usually present within 12 to 24 hours. It may last only a few days or continue for weeks. It usually ranges between 100 and 101 degrees but may go to 102. Leucocytosis of the polymorphonuclear type coincides with the fever. It usually ranges between 12,000 and 15,000. Libman[5] reports variations between 9,000 and 25,000.

B. Pericarditis as evidenced by a pericardial friction rub is a sign of value when it is found but unimportant if not. It is usually associated with occlusion of the anterior descendens branch of the left coronary on the anterior surface of the left ventricle.

C. Emboli, the result of breaking off of fragments of thrombi formed on the inner walls of the ventricles are not uncommon. Doubtful diagnosis have sometimes been cleared up by the occurrence of such an accident. Those from the right ventricle go to the lungs and produce pulmonary infarction; those from the left lodge in the brain, kidneys, spleen or extremities. Hamman has placed particular stress on their occurrence as an aid to diagnosis.

D. If the area of infarction is too great to be organized into fibrous scar tissue, or if in a previously undamaged heart there has been comparatively little anastomosis, part of the area may become necrosed and the resultant softening lead to cardiac rupture. Because of the greater anastomosis which ordinarily takes place with advancing age we have the paradox that the younger the patient the more serious the prognosis. Older patients may withstand several attacks of occlusion. Cardiac aneurysm and rupture is a difficult

clinical diagnosis but has been correctly made a few times. Krumbhaar[6] reports 22 cases, two of which were diagnosed clinically and he also collects 632 post-mortem cases from literature.

5. Additional general symptoms.

A. The most important are those referable to the intestinal tract, nausea, vomiting, diarrhea. No physician would now attribute a case of sudden death to that favorite newspaper syndrome "acute indigestion." Unfortunately many of the cases of coronary obstruction present the picture of an acute upper abdominal accident such as gall stones, kidney stone colic, ruptured duodenal ulcer, acute pancreatitis, etc. In probably every hospital in the country exploratory laporotomies have been performed on cases of occlusion with negative results as far as relief is concerned, but with unfortunate results for the patient. Levine and Tranter[7] wrote a very illuminating paper on this subject.

B. Facies: Severe cases show a most peculiar color, a leaden hue which is a combination of the pallor of shock and cyanosis. It somewhat resembles argyria. It is extremely suggestive when present.

C. Vasomotor phenomena are common. Blanching has been mentioned. Sweating is often profuse, a cold sweat which stands out in beads on the forehead; occasionally the patient is bathed in perspiration; sometimes only night sweats occur; occasionally there is localized sweating e. g. one side of the head, one arm, etc. Flushing and a sensation of heat may occur.

D. There is usually considerable anxiety—the patient is aware of the gravity of his condition, even though unaware of the cause. Consciousness is usually retained to the end, but attacks of fainting, convulsions or delirium may occur.

There are some general associated phenomena which aid by helping us to consider coronary occlusion.

The age range is from 40 years upward. The average age is 55. As regards sex the condition is preponderantly one of males.

The most important etiological factors are hypertension and arterio sclerosis. A patient who from previous examination or history is known to have had hypertension even though the pressure is low following the present attack must be suspect.

Unfortunately for diagnostic purposes coronary sclerosis and peripheral sclerosis are not always coincident, but peripheral sclerosis may help direct our attention to the possibility of coronary sclerosis.

The most common associated infections are syphilis (10%), diabetes (7%) and gout.

In a general paper such as this I have purposely omitted any reference to electrocardiographic studies. Suffice it to say that the electrocardiagram is probably the greatest single asset we possess in trying to arrive at a diagnosis. It is particularly valuable in the atypical cases or in helping to make a correct diagnosis after considerable time has elapsed following the acute attack.

The preceding analysis of signs and symptoms does not convey any idea of the complex combinations which go to make up the individual case. Permit me to illustrate by a very few case histories.

Case Reports

1. Mr. L. R., age 54, Wholesale Merchant.

Past History: Twenty years ago had tuberculosis for which he took treatment for about two years. Was a man of very temperate habits and always took excellent care of himself. For the past two years he suffered at times from vague feelings of oppression under the upper sternum which he attributed to his old tuberculosis infection and for which he did not consult a physician.

Present Illness: At noon on November 19, 1930, as he was getting out of his car to attend a luncheon he felt a sudden constriction over the precordial region. He went in and ate luncheon, but it was noticed that he looked quite pale. He went to bed that afternoon but felt better in the evening and ate his usual dinner, but went to bed early saying he didn't feel well. About midnight he was awakened by a feeling of heaviness in the chest, but went back to sleep again. He got up and ate a good breakfast, but just as he finished he vomited and collapsed. Dr. W. K. Smith was called and made a diagnosis of status anginosus giving the patient ¼-grain morphia.

Seen in consultation with Dr. Smith at 9:30 a. m. the patient presented the rather typical appearance of acute coronary occlusion. He was lying fully dressed, but absolutely immobile on a sofa, not even turning the head as we entered. He was fully conscious. The face was a waxen color, the lips colorless. Respirations were slightly labored. The pulse could not be felt and no blood pressure reading was obtainable. The heart sounds were almost inaudible, but it could be determined

that the rate was considerably increased and there were frequent extra-systoles. There were scattered moist rales at both lung bases. There were no other signs of congestive failure. He gradually grew weaker, Cheyne-Stokes respiration developed, he lost consciousness and died about 3:00 p. m.

2. This case exemplifies the development of myocardial insufficiency following the acute attack with improvement and death later from a second attack.

Mr. J. J. L., age 58, Retired Contractor.

Past History: Unimportant except that when examined personally seven years previously his blood pressure was 155/100.

Present Illness: In July, 1928, he had a sudden attack of pain in the left chest anteriorly. There was some fever and dyspnoea and a diagnosis of pleurisy was made by the physician in charge. The dyspnoea persisted after he got out of bed two weeks later and his feet and ankles swelled. His physician prescribed digitalis and Florida in the early fall.

The patient improved on rest in Florida and left off the digitalis. He was walking pretty well and even did some surf bathing. In January, 1929 he had a sudden attack of congestive failure. An electrocardiogram made at that time showed changes which we associate with coronary occlusion, although this one which the patient brought with him was not so interpreted. He improved sufficiently to make the trip to Hot Springs, arriving here in April.

Physical Examination: Shows a stocky heavy set man lying on two pillows. There is slight congestion of the face and the lips are a trifle cyanosed. The temperature is normal, pulse 76 regular. The apex beat could not be seen or felt, but was heard indistinctly in the 6th i. s., just outside the nipple line. There was a faint systolic murmur, gallop rhythm was made out in the 4th i. s. near the sternum. There was no peripheral sclerosis. The blood pressure was 118/65. There were rales at both lung bases. The liver was slightly enlarged, there was some free fluid in the abdomen and edema of the dependent parts of the body.

At intervals he showed a dropped beat of heart block probably from digitalis. About two weeks after arrival he had a sudden pain in the right upper chest and a few hours later coughed up blood tinged sputum. The symptoms disappeared in a few days. This was undoubtedly a small pulmonary infarction. At intervals he showed premature contractions which could be controlled by digitalis.

The patient remained here two months and left able to walk half a mile with no distress although taking a maintenance dose of digitalis.

I am informed he died suddenly in October, 1929, fifteen months after what was probably his initial attack of coronary occlusion.

3. This case illustrates well some of the signs which help to confuse in making the differential diagnosis.

Mr. J. B. K., age 67, Merchant.

Past History: General health has always been good. Has been coming to Hot Springs from his home in Wisconsin for a number of years. Three years ago had a prostatectomy because of obstruction. Has a slight urinary retention at the present time and a mild cystitis. On November 1, 1930, while on a hunting trip in the Dakotas was stricken after dinner one evening with a sudden severe pain under the lower sternum. There was no nausea or vomiting, but extreme shock and collapse. He was seen by a physician who heard some rales at the lung bases and also a friction rub just to the left of the sternum. He found the heart and pulse normal, but the blood pressure was only 95/55. There was no rise of temperature. He made a diagnosis of mediastinal pleurisy. The pain was relieved for several hours by ½-grain of morphia, but returned again and the dose was repeated. The patient was in bed for about ten days and returned home. There on November 14th, he had a second attack less severe than the first. The pain this time was more in the epigastrium. There was considerable tenderness and muscle rigidity over the upper abdomen. The temperature went to 101.5 degrees. W. B. C numbered 9,600 with 73 per cent polys. In this attack a diagnosis of acute pancreatitis was made.

The patient came to Hot Springs and was referred to me for consultation by Dr. C. E. Garratt who suspected a cardiac condition.

The patient stated that since his first attack he suffered from shortness of breath on moderate exertion for the first time in his life.

Physical Examination: Reveals a large heavy set man with a slight grayish pallor of the face. There is visible systolic pulsation of the neck vessels, but no increased venous filling. Respiratory movements are not increased in frequency or amplitude. The heart

is not enlarged. The apex beat is not visible and the outermost lower border cannot be palpated, but the sounds are best heard in the 5th i. s. about 2 cm. inside the nipple line. The sounds are distinct, but have a distant quality. The aortic second sound is accentuated in comparison with the other sounds. No murmurs are present and no friction rub is made out at the present time. The cardiac rhythm is essentially regular, the rate is 92 but interrupted at intervals by a premature contraction which is not transmitted to the wrist.

There is moderate peripheral sclerosis. The blood pressure 110/85.

The lungs are clear on percussion and auscultation.

The liver is not particularly enlarged or tender.

There is no edema of the dependent parts.

Electrocardiogram: Shows changes pathognomonic of coronary occlusion, probably of the anterior descending branch of the left coronary resulting in an area of myocardial infarction on the anterior surface near the apex of the left ventricle.

Diagnosis: Arterio sclerotic heart disease; coronary sclerosis, coronary thrombosis, myocardial infarction; anginal heart failure. Functional capacity Class 2A (Physical activity slightly limited).

Discussion: The electrocardiographic findings corroborate the impression gained by history and previous physical findings, *i. e.*, that Mr. K. suffered an acute coronary thrombosis on the anterior surface of the left ventricle. The friction rub heard over the precordial area was evidently pericardial; fever and leucocytosis are usually associated with myocardial infarction as are also rales at the lung bases. Treatment at the present time should be largely preventive, plenty of rest, a bland diet of low protein-high carbohydrate content and 1½-grain metaphyllin tablets, one t. i. d. Prognosis is difficult to individualize. Recurrence is almost certain to occur sooner or later. It may be postponed for a considerable length of time by proper care and one or more future attacks may be survived if recognized because of the extensive anastomoses present in an older person's heart.

Minimal Signs: Even more interesting to me personally is the fourth type of coronary occlusion, that in which the symptoms may be so slight that the diagnosis may be suspected, but almost impossible to confirm. I hope I shall not confuse the clear picture of the typical case by laying too much emphasis on the minimal signs, important though I feel it to be that the earliest diagnosis possible be made in order to preserve and prolong the life of patients suffering from coronary sclerosis. There are a few thoughts on the subject which with your continued indulgence I will mention briefly.

Any patient who suffers an anginal attack which does not very quickly clear up on rest, nitrites or both should be thoroughly investigated. Dr. F. J. Scully referred to me for consultation a few weeks ago a patient 40 years of age who had suffered for several years from neuritis in various parts of the body. In the previous month he had had several attacks of pain under the lower end of the sternum and on the inner aspect of the left upper arm. These attacks lasted from ½ hour to several hours and twice required morphia for relief. He was seen in one attack by Dr. Scully at his office. The patient suffered more from nausea than pain. There were no abnormal signs in the chest. Seen by me the following day there were only two significant findings on physical examination, a marked tenderness of the skin over the left chest and on the inner side of the arm, and the blood pressure which was usually about 135 was down to 112. The electrocardiogram revealed extensive myocardial changes due to coronary sclerosis.

The sudden onset of ectopic rhythms in elderly patients must be viewed with suspicion. Several years ago a man of seventy-five was referred to me because of sudden onset of irregular heart beat. This proved to be auricular fibrillation with symptoms of moderate congestive failure. He improved considerably after a month in bed and seen again two years later was apparently in as good condition as before his attack, the heart having reverted to normal rhythm in the meantime.

A man of sixty-two had a "sinking sensation" in the chest and lost consciousness for a few minutes. A little later in the day he was aware of an irregular heart action. An electrocardiogram revealed auricular fibrillation and changes which we associate with coronary sclerosis. He is still living in fairly good health a year later.

Can we not reasonably assume that the oc-

clusion of a small coronary branch was responsible for these cardiac accidents?

The sudden onset of signs of congestive failure in a patient known to have angina is usually very significant of acute coronary occlusion. A patient forty-three years old who three months previously had had a diagnosis of coronary sclerosis with anginal attacks made at Mayo's consulted me for sudden dyspnoea which had started a few days previously after an outing. The patient presented obvious dyspnoea, the face had a grayish pallor, the blood pressure was down to 82/65, the heart sounds were almost indistinguishable, there were rales at both bases and the electrocardiogram confirmed the diagnosis of acute coronary occlusion.*

Paroxysmal dyspnoea occurring during the day time and lasting an hour or two may be the only prominent symptom. The dyspnoea may be obvious or may be mostly a conscious effort of the patient to obtain air without any special increase in the respiratory rate.

Dr. V. P. Diederich referred to me for consultation a man of sixty-eight who presented a slightly irregular pulse of 76 and a history of periodical attacks of dyspnoea lasting from an hour to an hour and a half. The physical examination revealed practically nothing except an occasional dropped beat of heart block. The electrocardiogram showed the most bizarre changes with extensive myocardial and conduction system changes. The man died suddenly while out walking six weeks later.

This paroxysmal dyspnoea is probably a substitute for pain. It is possibly due to anoxemia of the myocardium as is the pain and may be allied to the paroxysmal nocturnal dyspnoea we find so frequently in syphilitic aortic insufficiency and syphilitic aortitis with involvement of the coronary openings.

Most cases of acute coronary occlusion are of course due to thrombosis of sclerosed coronary arteries. Syphilis may cause sudden death from occlusion of a coronary artery at its opening in the aorta.

A man of thirty-eight who had a luetic infection twelve years previously with grossly inadequate treatment was seen at the Cardiac Clinic of the Leo N. Levi Hospital. The blood Wassermann was four plus. The heart was not enlarged. There were no thrills. A systolic murmur was heard over the aortic area. The cardiac rhythm was irregular, typically that of auricular fibrillation. This is a very unusual arrhythmia in cardio-vascular syphilis, but he gave no history of rheumatism and no involvement of the mitral valve could be made out. Preparations were made to admit him to the hospital on the following day for further observation and treatment. That night he was seen down town rather late, possibly taking a last fling before submitting to hospital discipline. The next morning he was discovered dead in bed. Autopsy revealed syphilitic aortitis with almost complete closure of the right coronary artery by scar tissue. Except for the first quarter-inch the rest of the artery was perfectly normal. There was no evidence of rheumatic endocarditis.

A sudden increase in the severity of symptoms in a patient already suffering from moderate congestive failure may be due to an acute occlusion. A man of sixty-eight was admitted to the Levi Hospital as an emergency case. For several years he had suffered from shortness of breath on mild exertion and had some swelling of the feet and ankles. The morning of the day on which he was admitted he suddenly became very short of breath after the morning meal and in a few minutes collapsed. When seen shortly after admission he was semi-conscious, extremely cyanotic and his respirations were of the Cheyne-Stokes type. There was considerable pulmonary edema and the heart sounds could hardly be made out, but the pulse was only 86 and perfectly regular. The blood pressure 120/75. Death occurred in a few hours. Post-mortem examination revealed a heart with a number of old healed infarcts and a recent thrombus of the anterior descendens branch of the left coronary with a fresh infarction on the anterior surface of the left ventricle near the apex which extended to the endocardium. Over the injured endocardium on the inner surface of the ventricle a thrombus had just begun to organize.

These cases represent some of the atypical occurrences which should direct our attention to advancing coronary disease.

Conclusion

The manifestations of the typical case of coronary occlusion presents a clinical picture which has only to be seen once to be recognized.

The sudden severe substernal or epigastric

*NOTE—Since this paper was written this patient was seen in a second acute attack of coronary occlusion from which he died three hours later.

pain which is unrelieved by rest or nitrites; the shock, prostration, pallor, fall in blood pressure; the symptoms of acute myocardial insufficiency, dyspnoea, cyanosis, pulmonary edema, enlargement of the liver, albuminuria, Cheyne-Stokes breathing, feeble heart sounds; the later symptoms associated with the myocardial infarction, fever, leucocytosis, pericardial friction rub, embolic phenomena; the digestive disturbances, nausea, vomiting, diarrhoea which may simulate an acute upper abdominal surgical emergency; the characteristic leaden-hued faces, the cold perspiration, the mental anguish—those form an unmistakable clinical entity.

What constitute the minimal criteria for the diagnosis of acute coronary occlusion? That question is unanswerable today. We can recognize a few of the atypical types as mentioned above, attacks of *Status anginosus* in angina pectoris, the sudden onset of congestive failure in an anginal case; acute exacerbations in a patient with chronic myocardial insufficiency; the onset of various arrhythmias in elderly patients; paroxysmal dyspnoea; sudden fall in blood in chronic hypertension; sudden appearance of gastro-intestinal disturbances in middle-aged individuals with previously good digestions; severe or prolonged pain in cardio-vascular syphilis. Inasmuch as the incidence of this type of heart disease is increasing rapidly it is important for us as physicians to recognize its occurrence in the earlier stages of its development in order that we may prolong the life span of the individual to the fullest possible extent.

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Abstract

NEPHRITIS AND ITS RELATION TO CARDIOVASCULAR DISEASE

On the basis of statistical investigation of 212 cases of diffuse nephritis, William Ophuls, San Francisco (Journal A. M. A., March 7, 1931), concludes that nephritis and cardiovascular disease are so closely connected with each other that a separate consideration fails to afford a complete view of the problem. The term nephritis should be reserved for cases in which there are serious diffuse inflammatory lesions in the kidneys. The general run of cases of nephritis can be conveniently classified as (1) acute, (2) subacute, (3) amyloid and (4) chronic nephritis. Acute and subacute nephritis are almost invariably due to septic, particularly streptococcal, infection. The etiology of amyloid nephritis is given by the diseases that produce amyloidosis such as chronic sepsis, tuberculosis, syphilis and malignant tumors. The indications are that in the causation of chronic nephritis also chronic septic infection of a focal character play an important part. The amount of arterial involvement in otherwise similar cases of nephritis varies greatly from nothing at all to very severe lesions locally and generally. In nephritis high blood pressure often develops without the presence of any arterial lesions in the kidneys or elsewhere and it is almost constant when there are arterial changes even when they are present only locally. There are a few cases of extreme chronic nephritis without vascular lesions which do not develop any elevation of blood pressure. Edema and secondary anemia are frequent complications of nephritis, but their occurrence is quite inconsistant and bears no direct relation to the character or the extent of renal lesions. Edema and anemia are probably caused by the same factors that underlie the development of the nephritis. The noxious agents evidently vary greatly in their effect on the blood and the capillary blood vessels. In acute nephritis the deaths are usually due to the infection that caused the nephritis. This is also true of amyloid nephritis. In subacute nephritis a considerable proportion of the patients die of the infectious process that causes the nephritis. About the same number succumb to conditions connected with their renal disease. Chronic nephritis is usually the direct cause

(Continued on page 204)

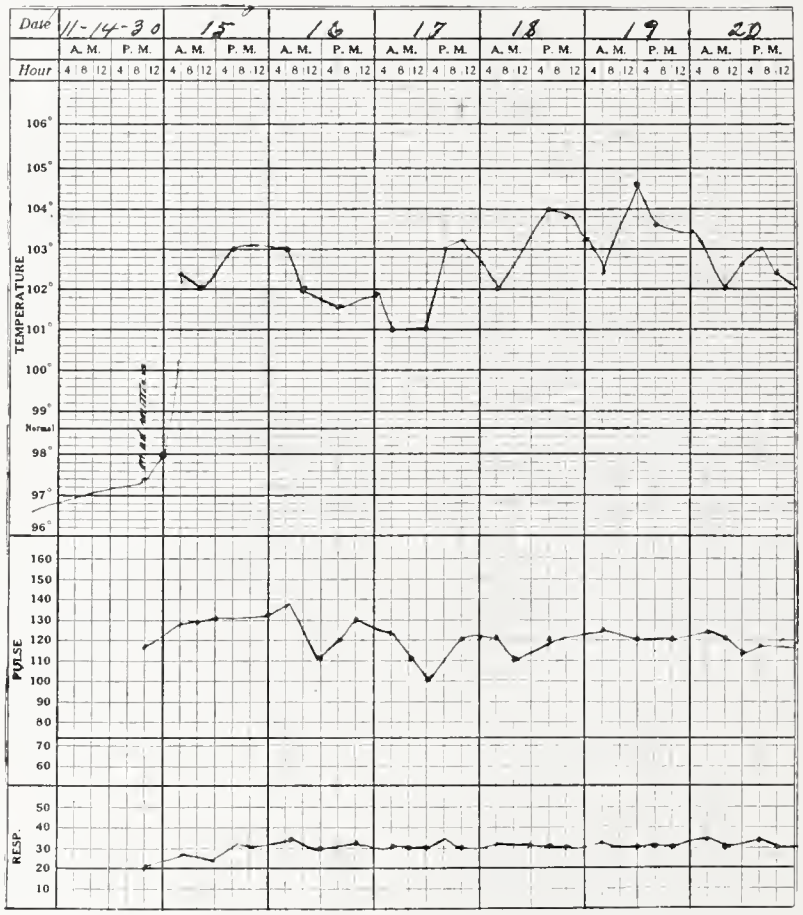
FEVER ASSOCIATED WITH SYPHILIS

Oliver C. Melson, M. D., F. A. C. P.
From the Department of Medicine,
University of Arkansas
Little Rock

That fever occurs in syphilis has long been recognized. However, fever is commonly associated with the secondary stage. From a diagnostic point of view, the fever in this stage does not have the importance that fever in the tertiary stage attains. For this reason it seems timely to report the following case:

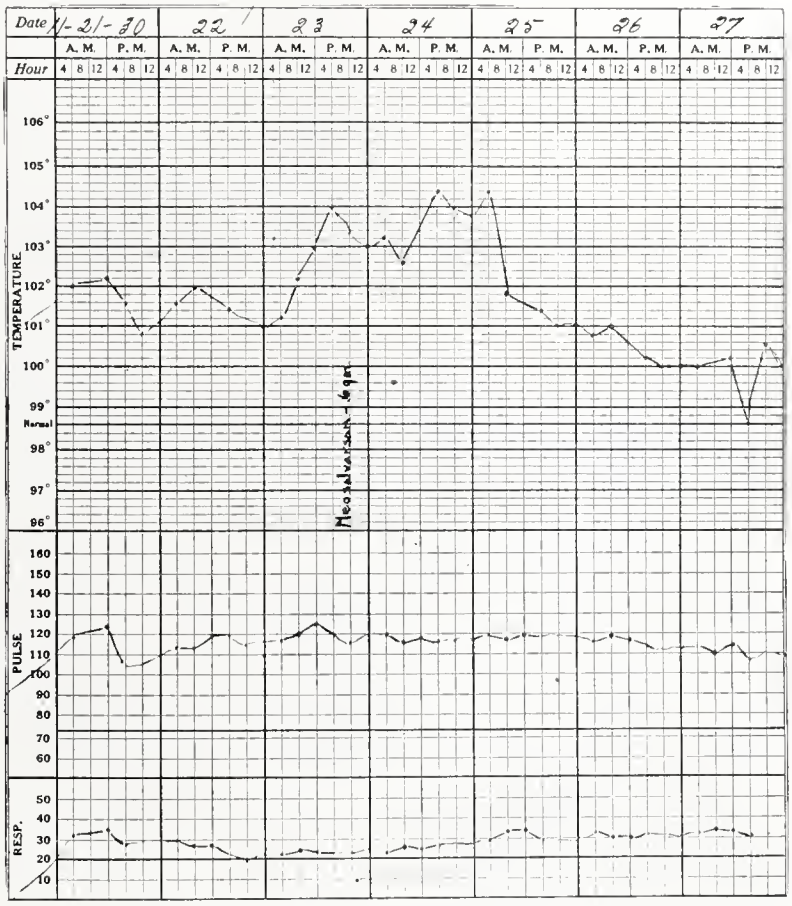
A negro river worker aged 28 was admitted to the hospital following a collapse on the street. It was noted that he was not quite rational and a satisfactory history was not obtained. He complained only of hiccough which he said had been present rather persistently for two weeks prior to his entrance to the hospital. There was no pain nor aching. His appetite had been good, all foods had seemed to agree with him, but for some unaccountable reason he had lost about 30 pounds in weight during the previous two months. He had vomited yellow fluid on several occasions. Constipation was present but not marked. Also, he had slight unproductive cough. He denied any venereal infection. His only previous disabilities had been occasioned by malarial fever.

Observation at his entrance showed an undernourished negro weighing 120 pounds. His normal weight was 147 pounds. Temperature was 102 degress F., and the pulse rate was 126 of fair volume. Essentially each respiration terminated in hiccough. The cardiac dullness seemed to extend to the left about 2 cms. beyond the midclavicular line. Otherwise the physical examination was without noteworthy details. In spite of negative chest findings a working diagnosis of pulmonary tuberculosis was made by the interne.



The laboratories developed the following facts: A mild cardiac enlargement with an increased heart rate appeared under fluoroscopy. No pulmonary involvement was revealed. The hemoglobin was 70 per cent, the leucocytes 8,500. A differential count showed 30 per cent lymphocytes, 69 per cent polymorphonuclear neutrophiles and 1 per cent eosinophiles. There was a trace of albumin in the urine as well as many fine and coarse granular casts. Sputum was negative for the bacillus

of tuberculosis. Two Widals were positive in dilutions of 1:80. Blood Wassermann was strongly positive. Ten days after admission the leucocytes numbered 6,250 per cubic millimeter and a differential count showed 28 per cent lymphocytes, and 72 per cent polymorphonuclear neutrophiles. At this time the urine still contained a trace of albumin, but only an occasional fine granular cast. A third leucocyte count showed 7,050 cells per cubic millimeter with 68 per cent neutrophilic polymorphonuclears, 29 per cent lymphocytes and 3 per cent eosinophiles. One blood culture was incubated six days with sterile results. No malaria was found at any time in the blood smears. A spinal fluid examination showed globulin and Wassermann negative and a cell count of 5 per cubic millimeter. The temperature, pulse and respiratory charts are illustrated.



Comment

This patient was considered a probable tubercular subject by the interne. His conclusion was based upon loss of weight, weakness and cough. Roentgenograms confirmed the negative physical findings in the chest. Too much stress, I believe, was placed upon the positive Widal in dilution of 1:80 and when seen by the writer, the patient was being treated as a typhoid fever case. It seemed wise to exclude other possible sources of the fever. Malta fever, sepsis, malaria and Hodgkins were considered, but no substantiating evidence appeared. The positive Wassermann essentially was the only bit of evidence worth noting. Its connection with the patient's complaint could not be adequately explained. On the hope that some relief might be obtained, neoarsphenamine .6 gms. was administered intravenously. The influence upon the fever and hiccough was little short of miraculous. In five days a second injection of .45 gms. was given and thereafter at weekly intervals until the patient was discharged. A slight rise in fever occurred a few days after the first injection, but as can be seen from the accompanying charts, the temperature remained normal afterward. The patient was dismissed to continue treatment at the outpatient department.

Discussion

Since Bäumler in 1872 first called attention to it, several authors have reported cases of tertiary syphilis in which the fever was an

outstanding symptom. In a brief review of the literature, several interesting features have been reported. Futcher reported a case in which fever occurred 29 years after the primary chancre. Sinha's case had fever almost constantly for ten years. Bassett Smith had a case whose daily temperature range was seven degrees Fahrenheit. Most observers have reported that chills are not common, that loss of weight and secondary anemia are common likewise liver and splenic enlargements. Most writers on the subject prescribed mercury and iodide of potassium with successful control of the fever. Some recommend rather the arsenicals. A few have used the latter after failure with the iodide and mercury.

Conclusion

While not a common cause, tertiary syphilis must be considered as a probable etiological factor in any patient with prolonged fever. If clinical and laboratory tests do not conclusively rule it out, therapeutic test should be performed.

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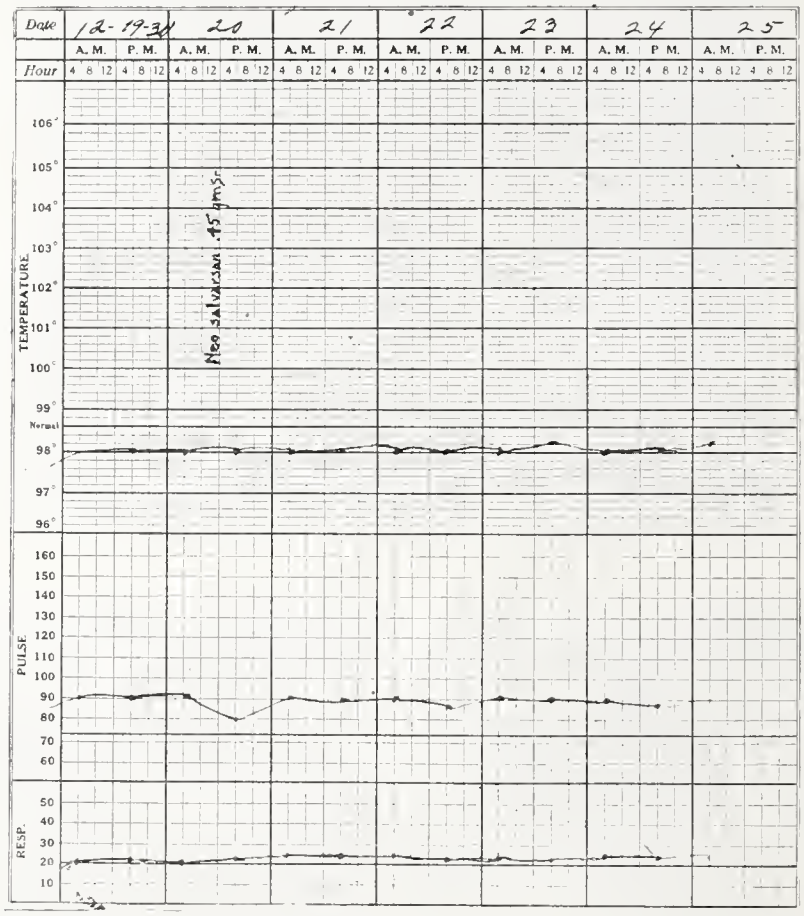

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Editorial

SPECIAL MEETING OF THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

(Reported by S. J. Wolfermann, Sec.)

On Friday, February 13, the Council of the Arkansas Medical Society took cognizance of the serious problem confronting rural physicians in their efforts to administer to the indigent sick of the drouth-stricken sections of the State.

Present: E. E. Barlow, D. A. Rhinehart, Wm. R. Bathurst, W. W. Verser, L. T. Evans, M. C. John, H. T. Smith, L. L. Purifoy, C. A. Archer, Dewell Gann, Sr., M. E. McCaskill, W. H. Poynor, S. J. Wolfermann and Mr. Peter Deisch. Guests: Drs. W. H. Toland, Erskine Smith, S. A. Turner, F. R. Duncan, C. W. Garrison and Gordon Hastings.

Dr. C. W. Garrison, State Health Officer, addressed the meeting, the substance of his remarks being as follows: Congress has appropriated $2,000,000.00 to be administered by the U. S. Public Health service through the State Departments of Health in the 22 drouth stricken States; the funds are made available for investigation and health demonstration work, for medical supplies and biologicals; the allocation to each State and community to be based on the local ability to pay and the needs, at the discretion of the Surgeon General.

Each State Health Officer has been requested to draft an outline or proposal for his State and submit it promptly to the Surgeon General for consideration and approval.

It was the opinion of the Surgeon General, his assistants, and the State Health Officers in the drouth area with the exception of the speaker, that no medical supplies should be distributed. This was probably due to the fact that an adequate supply would cost many times the amount of the appropriation available and that the distribution of drugs under a Federal appropriation to meet the demands of the various practitioners would be so varied intricate and difficult that it should not be undertaken. It appeared that Arkansas was in much graver need in this respect than any other State.

A resolution was adopted by the Memphis conference for the guidance of the Surgeon

General in setting up his regulations, declaring biologicals to be necessary and made available. Also declaring it to be the sense of the conference that the major problems in the drouth area was one of public health and all local health organizations should be strengthened where necessary and health personnel placed in unorganized areas where most needed.

The question of aid to hospitals was discussed, but little hopes was held out except it might be in furnishing biologicals to the injured patient.

Dr. Garrison outlined briefly the rural sanitation program in Arkansas at the present time, the serious financial status, indicated the necessity for maintaining the highest possible efficiency in preventing epidemics at this time as well as nutritional disorders. He asked the council for an expression relative to the drouth relief measures as pertains to aid for physicians and hospitals, in their effort to serve the indigent sick.

Following a general discussion, the council adopted the following resolution:

Resolved, that the need for financial aid in almost every county is very urgent, and will continue unabated for a considerable time.

That sickness will be more prevalent than usual due to lack of physical resistance because of the under-nourished condition of many of our people.

That provision has been made to some extent for their physical condition, but none for medicines or hospitalization.

That Arkansas' proportion of the $2,000,000.00 appropriated by the Federal Government should be made available immediately and with the least restrictions possible under the law, and that a reasonable proportion be allocated for drugs and biologicals; and that these supplies be also made available for use in hospitalized indigent cases.

That immediate action is most necessary as doctors who have always given freely of their services are now in some cases unable longer to do so, and their transportation, medical and surgical supplies should be furnished them when attending our indigent sick.

That if such relief for the physicians under the Federal appropriation above referred to is unavailable or inadequate that it is the sense and desire of this council that every effort be made to secure this aid both for the relief of the physician and service to the people.

NEPHRITIS AND ITS RELATION TO CARDIOVASCULAR DISEASE

(Continued from page 199)

of death and most of these patients die of renal insufficiency. Connecting chronic nephritis and uncomplicated cardiovascular disease, there is a small group of cases that exhibit but limited renal lesions. High blood pressure is not so constant in them as in typical cases of chronic nephritis. Only a few of these cases finally develop signs of renal insufficiency. Numerically, general arteriosclerosis is a much larger problem than nephritis, but only one-third of the cases develop disturbances in the general circulation. High blood pressure and cardiac hypertrophy occurs more frequently when the lesions in the blood vessels are well marked, but it may develop in individuals with nearly normal blood vessels. In general arteriosclerosis, moderate focal renal lesions have no effect on the blood pressure. The usual cause of death in uncomplicated cardiovascular disease is cardiac decompensation. Nephritis often develops early. Its incidence in the different age groups remains about the same and never exceeds 10 per cent of all cases in any age group. General arteriosclerosis develops late and increases rapidly and constantly in incidence, reaching nearly 90 per cent in persons over seventy.

Abstract

INTRINSIC CARBOHYDRATE METABOLISM OF SKIN

In a preliminary report of experimental studies, Donald M. Pillsbury, Philadelphia (Journal A. M. A., February 7, 1931), states that lactic acid, an important product of carbohydrate metabolism, is normally present in the skin. Lactic acid formation in vitro is a consistently demonstrable finding in normal skin, except when the skin has been previously frozen. Decreased oxygen tension has no significant effect onin vitro lactic acid formation by the skin. In the presence of dextrose in the incubating medium, especially in phosphate buffer solution, lactic acid formation is increased. The skin of animals previously injected with dextrose forms lactic acid in vitro in increased amounts. The lactic acid level of skin tends to be low in starved animals and higher in well fed animals.

Personal and News Items

The annual session of the American Medical Association will be held June 8-12, 1931, at Philadelphia.

Dr. L. H. McDaniel of Tyronza was elected President of the Tri-States Medical Association of Mississippi, Arkansas and Tennessee, at their recent meeting held in Memphis.

The Hot Springs County Medical Society met at the office of Dr. E. T. Bramlitt at Malvern, February 2, and elected the following officers for 1931: President, E. T. Bramlitt, Malvern; Vice-President, J. M. Williams; Secretary-Treasurer, W. G. Hodges.

Dr. J. P. Sheppard of Little Rock has been appointed district and hospital surgeon for the Rock Island Lines succeeding the late Dr. J. P. Runyan. Dr. J. I. Scarborough and Dr. M. D. Ogden are included on the Surgical Staff. The Baptist Hospital will be used for their patients.

Dr. W. H. Newsum of Louann was found guilty of having practiced without a license and was fined $100.00 and costs by Justice L. W. Bowers, February 20. He appealed.

Dr. Newsum claimed to have had a license which is lost. He said he secured a license in Miller County in 1903.

The Searcy County Medical Society met in regular session February 10, and elected the following officers:

President, George W. Dickens, Leslie; Vice-President, E. G. Fendley, Leslie; Secretary-Treasurer, Sam G. Daniel, Marshall; Delegate to State Society Meeting, J. A. Henley, Marshall.

The passage by the Senate of House Bill No. 338, allots $275,000 for the construction of laboratories and a teaching building for the University of Arkansas Medical School, Little Rock, the first building appropriation in the fifty-two years' history of the school.

Funds for the appropriation are to be derived from the sale of bonds, which are to be retired with the collections from the additional one-half cent cigarette tax.

Dr. and Mrs. Harry E. Cockerham of Portland announce the marriage of their daughter, Dorothy Mae, to William A. Reeder of New Orleans. The wedding was solemnized February 21.

Mrs. Clyde Chester Burbank announces the marriage of her daughter, Ruth, to Dr. Daniel R. Hardeman, February 14, 1931, at St. Paul, Minnesota. Dr. Hardeman is the son of the late Dr. D. R. Hardeman of Little Rock.

EXECUTIVE MEETING OF THE WOMAN'S AUXILIARY TO THE ARKANSAS MEDICAL SOCIETY

The executive board of the Woman's Auxiliary to The Arkansas Medical Society held its semi-annual meeting in Little Rock, February 20, at the Woman's City Club, followed by a luncheon. Mrs. Chas. E. Oates, President, presided.

Reports from chairman of standing committees were as follows: Organization—Mrs. P. H. Phillips, Ashdown. She told of some of the plans being made for the State meeting in Texarkana, in April. Student Loan Fund—Mrs. Curtiss Jones, Benton. She reported six loans made to medical students and applications from a number of other students. Mrs. J. B. Crawford, Chairman Committee on Hygeia, and Mrs. B. A. Rhinehart, Chairman, Committee on Public Relations, gave reports.

A motion was carried that the President, Mrs. Chas. E. Oates, appoint a committee to sit in the Council of the Arkansas Congress of Parent-Teacher Education. Mesdames H. E. Whitehead, DeWitt and E. L. Thompson, Hot Springs, were appointed.

The following county reports were made: Mrs. W. R. Brooksher, Jr., Sebastian County; Mrs. C. W. Jones, Saline County; Mrs. P. H. Phillips, Miller County; Mrs. Marcus Smith, Faulkner County; Mrs. P. E. Benton, Prairie County, and Mrs. J. B. Crawford, Pulaski County.

PANORAMIC VIEW OF THE WOMAN'S AUXILIARY TO THE A. M. A.

North Central States

Mrs. James Blake

According to the Constitution and By-laws of the Auxiliary to the American Medical Association the organization program is carried on by the active work of the vice-presidents. Mrs. Southgate Leigh of Norfolk, Va., is first

vice-president and automatically chairman of organization. Due to her location on the map the second vice-president finds herself interested in the destinies of the North Central group of States.

Looking backward, with pleasant memories to Detroit, and forward with delightful anticipations to Philadelphia we find this group of States all doing something of common interest.

In the January Journal of the Indiana Medical Society, the Auxiliary President stresses the importance of more constructive work on the part of her organized county groups. "Physicians' wives," she says, in her New Year's Address, "hold an enviable position in being privileged to have a part in a world-wide health program, and I would urge every physician's wife, to bring before other women *dependable* knowledge, and a just appreciation of the real spirit and purpose and actual achievements of the medical profession." So from Indiana we know we are to have constructive work during this year. Physicians as a class are not prone to participate in legislative matters but when four distinctly separate bills, which affect the profession, directly, are presented during one session of a State's Legislature, it is time to be up and doing.

Such is Indiana's situation this year and the doctors of the seventh district have thought it worthwhile to *instruct* their auxiliary members on these subjects that their influence may be *properly* used. The Indiana Journal, never fails to give the Auxiliary space, and it is little wonder the Indiana women are up and coming, when they have such Editorial Notes to enlighten and guide them in their constructive program work, as one finds in this same Journal.

Kansas is slowly getting a few things accomplished. A world-wide depression has rendered prophets quite fameless abroad as well as at home, but the doctor's wife in Kansas is coming into her own, and we prophesy that the Auxiliary will climb to the top due to the indomitable spirit of the leaders in that State.

In Illinois the motto might well read—"Builders we are, and builders we must ever be. Builders, not in stone that shelters life, but builders in life." We find good constructive programs—of well-balanced educational value, we find a Journal ever ready to broadcast Auxiliary news, and best of all we find a healthy organization line-up, and an Advisory Board from their Medical Society. Several of their county groups are having their members get busy with the "Health Audit Program."

One project of worthy mention comes from Vermillion County on the Eastern boundary of the State. The County Auxiliary put on the Health Institute in Danville last November. A member from every agency in the county working out any kind of a health program, was included in the personnel of the speakers. It was for just one day, but it was worth 365 as a rouser for Auxiliary work. It really was sort of a Christmas Seal Campaign opening, a get-together of club women, and P. T. A. groups in the county. And what a wise idea for a Medical Auxiliary to have the head lines in the plans for such a "Health Day."

Wisconsin, Iowa and South Dakota are among the latest States to join the National Auxiliary. Organization is the keynote for their work, and the National Study Envelopes are offered as program material. Right now if the modern doctor's wife needs to get one thing more than another from her organization, it is the knowledge of what is going on in this world; especially the world of medicine. Women are discriminating more carefully in the clubs they are joining. They are asking what membership will mean to them, what they will get out of it. For that reason the subjects for study should be more carefully chosen, and the roll call should be made to count for something more than jokes and quotations from forgotten poets. It isn't a pleasant feeling for a busy mother who rides miles to a meeting to say when it is all over—"I can't say I know any more now than when I started." And so we find these three States getting themselves established on a firm foundation, with the National Program Envelopes scattered far and wide to aid and encourage Auxiliary members, already in, and prospective members.

Montana and North Dakota are debating pro-and-con but as Mrs. Hoxie said in her Detroit report—"I believe it will be a mistake from now on to organize a new State, unless it appears reasonably certain that there is interest enough among the doctors who want the Auxiliary, so they will foster it and stand back of it." And so we leave Montana half-hearted about forming an Auxiliary, and North Dakota in the air.

We find Michigan giving intelligent cooperation with State and county officials. Women like men are interested in the improvement of civic affairs and healthful living and are realizing that they need to be armed with a definite knowledge of health laws and public health practices.

Missouri is in a very healthy condition. We find that Mrs. A. B. McGlothan, the President-Elect of the Woman's Auxiliary to the American Medical Association, will attend President Hoover's White House Conference for Child Health and Protection to be held in Washington, D. C., February 19 to 21. Mrs. G. H. Hoxie the President for last year will also attend the White House Conference.

Mrs. A. W. McAlester tells us, the women of Missouri are finding the Study Envelopes, published by the Education Committee of the Woman's Auxiliary to the American Medical Association, most interesting and instructive. The studies on "Common Defects in Children," and on "Diphtheria," "Smallpox" and "Typhoid Fever" were recommended by the Department of Health in the Missouri Branch, National Congress of Parents and Teachers for use on Parent-Teacher Programs. Eight hundred copies of each were distributed for use in Parent-Teacher Units. Three hundred were requested and supplied for use in Parent Education Classes. Requests are constantly coming in for additional copies of the studies for use by teachers and Parent-Teacher Units. The Department of Public Information of the Extension Division of the University of Missouri is including these studies in its suggested programs for clubs in the Missouri Federation of Women's Clubs, and P. T. A. programs. This department requested back numbers of Hygeia for use in such programs. Three hundred copies of Hygeia were supplied by women in the State and by the circulation manager and are being extensively used in club programs. The Missouri Chairman of Public Relations is planning to have a copy of each of the studies "Common Defects in Children" and "Communicable Disease Control," sent to each county school superintendent in the State. Several of the County Auxiliaries are using the study envelopes in their programs.

Mrs. M. P. Overholser of Harrisonville, Mo., has been appointed chairman of Public Relations in the Missouri Auxiliary. This Auxiliary maintains a scholarship for a medical student, per capita quotas being assigned to each County Auxiliary.

They also have sent in 30 per cent of the total number of Hygeia subscriptions recorded from all Auxiliaries from January 1, 1930, to January 1, 1931. Some County Auxiliaries provide Hygeia for all their teachers. Among these are Buchanan, Gentry and Lafayette. Cape Girardeau County Auxiliary has just finished paying a $1,000.00 pledge to a hospital in the city and is now ready for another kind of work. They are a live group and certainly work hard to be able to accomplish so many wonderful worth while things.

Minnesota the North Star State has had a busy and successful year on organization. The President and Organization Chairman have visited over the State and planned meetings and educational programs with many County Groups. In October the International Medical Assembly met in Minneapolis, and at this time the Hennepin County Auxiliary celebrated its twentieth Anniversary, by being hostess for five days to the visiting doctors' wives. A great many social affairs and an Educational Day, which included a speaker on Public Health, were features. Hennepin County is having a year with a definite program. Each month a speaker is scheduled, and one meeting during the year is reciprocity day and each Auxiliary in the State is invited to send visitors. This group features philanthropic work for T. B. patients at Glen Lake and do much for the library at the sanatorium. They have helped the Medical Society furnish their library and club rooms spending $1,000.00.

Ramsey County does much the same work. They have a Scholarship Fund for Medical Students. St. Louis County is noted for work in the Public Relations Field. The State Medical Journal gives a page to Auxiliary news. One of the other counties takes care of a Nurse's Scholarship. The Minnesota Auxiliary has a splendid Advisory Board and a page in the State Journal. The President will be one of the speakers on the program for the Annual Conference of Secretaries of the Component Societies of the Minnesota State Medical Association, to be held in St. Paul the first week in February. This is the first time the Auxiliary has been asked to take part in this annual affair. Mrs. Hesselgrave's talk will be, "Uses of the Auxiliary."

And so closing my review of the work of

the North Central Group of States may I say again—

Builders we are, and Builders we must ever be,

Builders not in stone that shelters life, but

Builders in life itself—ever remembering the future of the world for generations to come depends upon what we *think* and *will* and *do today*.

ESSENTIALS OF A REGISTERED HOSPITAL

Prepared by the Council on Medical Education and Hospitals of the American Medical Association

In its work with hospitals it is the desire of the Council on Medical Education and Hospitals to cooperate in every way possible for the improvement of hospital service, whereby sick or injured people may be provided with the best possible care. The Council does not claim to have, nor does it assume any legal authority over any hospital, but recognizes clearly that the officers in charge of such institutions have the unquestioned right to conduct the hospitals in any way they deem wise. If a hospital desires to have the Council's endorsement, however—and that is what the Council's approval actually means—it should not be unwilling to comply with the principles which the Council deems necessary for such endorsement. The following "essentials," or principles have been prepared by the Council with the sole intention and desire of dealing with equal fairness to all institutions. A hospital seeking admission to the Register, therefore, should have the following qualifications:

1. A staff made up of one or more properly qualified physicians who shall be graduates of reputable medical schools; and all physicians treating patients in the hospital must be so qualified.

2. An able management which, depending on the size of the hospital may be in the hands of a competent physician, an able superintendent, or a board of trustees.

3. A competent physician-pathologist, either on the staff or easily accessible, who should examine and keep a careful record of tissues removed at all operations conducted in the hospital.

4. Careful histories and records of all patients admitted to the hospital with which should be filed reports of any laboratory analyses, roentgen-ray findings or pathologic reports of any tissues examined.

5. One or more competent nurses depending on the average number of its patients.

6. Regular staff conferences, at least monthly and preferably weekly, in all hospitals having staffs of three or more physicians. At these staff conferences complicated cases in the hospital should be considered, as well as all deaths occurring in the hospital during the period intervening between meetings. If necropsies have been held on any of these patients, these especially should be given discussion in which antemortem and post-mortem signs, symptoms and observations should be compared.

7. Hospitals are institutions which should not be conducted for profit, but for the purpose of securing better medical service for the community and they should always be conducted in accordance with the code of ethics of the American Medical Association.

RESOLUTION

Chicot County Medical Society, in regular session, adopted the following resolution:

We are of the opinion that the present laws governing the practice of medicine in the State of Arkansas are best adapted to the protection of the health of the people of the State.

We are of the opinion that every proposed law so far introduced would encourage less efficient medical service to the people by reducing the educational standard of doctors.

We are of the opinion that the State should carefully protect every man, woman and child from those who are not thoroughly trained in the care of the sick.

We are of the opinion that the State should encourage thoroughly trained physicians and should definitely discourage all forms of quackery.

We are of the opinion that the Basic Science Law under which we are now operating is the best possible safeguard of the health of our people, said law being also operative in many of the most advanced States of the Union.

We would, therefore, urge that the present Legislature can best conserve the health of our people by a strict policy of non-interference with our present Medical Practice laws.

(Signed) J. H. Burge, Sec.
W. W. Easterling, Pres.
S. W. Douglas, Com.

Correspondence

Scott, Ark., March 2, 1931.

Dr. William R. Bathurst,
Sec. Arkansas Medical Society,
Boyle Building,
Little Rock, Arkansas.

Dear Dr. Bathurst:

At a meeting of the Council of The Arkansas Medical Society in December, 1927, a resolution was adopted condemning as indecorus and undignified in members of the Arkansas Medical Society, the insertion of anything in their advertisements in The Journal, except their name, address, office hours, and the name of the specialty which they practiced. It particularly condemned the practice of enumerating equipment and special facilities of the advertiser.

In the last three issues of the Journal there has appeared an advertisement of the Laboratories of Drs. Rhinehart and Rhinehart that certainly does not conform to the dignified precepts set forth in this resolution. It is particularly unfortunate that this breach of decorum should have been made by the President-Elect of The Arkansas Medical Society, and it is to be hoped that his example will not lead our members to take up advertising by radio broadcast in competition with the leading dentifrices and mouth antiseptics of our day.

I am sending a copy of this letter to the secretaries of the several County Societies and hope you will give it space in The Journal.

Very truly,

Henry Thibault, M. D.

P. S.—I am inclosing the ads of Central Laboratories and Batesville Infirmary which have also digressed; in fact the Batesville Infirmary has become most enthusiastic in enumerating its equipment—H. T.

March 5, 1931.

Dr. Henry Thibault,
Scott, Arkansas.
Dear Dr. Thibault:

Dr. E. H. White, Secretary of the Pulaski County Medical Society, has handed me the letter you wrote him with the copy of the letter sent to Dr. Bathurst.

Before the advertisement in question was prepared for the Arkansas Medical Journal, I made a special trip to the library at the Medical School and looked over advertisements of other laboratories published in other State Medical Journals. I did this for the purpose of determining the custom with reference to such advertisements in other States. As you know, the question of ethics is largely determined by the practice of members of the medical profession in similar instances. Our advertisement was prepared following ideas obtained by the study of those published in other State journals.

Until your communication was received, I did not know that the Council had taken the action that you relate. Our advertisement will be immediately changed to correspond to the decision of the Council.

Throughout our professional career, we have made a particular effort to observe both the letter and the spirit of the code of medical ethics and we feel quite certain that no action of ours will ever, by example, be responsible for a wholesale breach of ethics as suggested in your letter.

I am sending a copy of this letter to Dr. Bathurst, requesting that, if he should think it advisable, it be published with your letter in the Journal. I should very much appreciate the names of the county secretaries to whom you sent your letter so that I may send them a copy of this one also.

Very truly yours,

D. A. Rhinehart, M. D.

Apparently the practice of medicine is threatened with an increasing economic disturbance due to the lessened incidence of certain diseases and our own apathy in cooperating with health agencies, so that the family physician may do the preventive work instead of subsidized doctors. These methods, however, are usually supported by public opinion. Whose fault is it? We have this, on one hand, and on the other, the factor of social needs and community problems. No clear thinker doubts the evidence of some increase in State medicine, but we should be in a position to guide its advent instead of letting it come, fighting it.—*W. H. Ross, M. D., Brentwood, N. Y.*

PRELIMINARY PROGRAM

Fifty-sixth Annual Session of the

Arkansas Medical Society

TEXARKANA

April 21 : 22 : 23 : 1931

Headquarters--Grim Hotel

SCIENTIFIC SESSION

Tuesday, April 21, 1:30 P. M.

"The Condition of Peripheral Vessels in Hypertension"—Lantern slides—Ralph A. Kinsella, St. Louis.

"The Treatment of Congestive Heart Failures"—Arthur G. Sullivan, Hot Springs.

"Essentials of Good Surgery"—Chas. S. Holt, Fort Smith.

"Chronic Appendicitis"—Geo. V. Lewis, Little Rock.

"Prevention of Post-Operative Sequelae"—A. T. Harrison, Searcy.

"Cor Bovinum; With Report of a Case"—R. B. Robins, Camden.

"Surgeon's Problem in Gas Gangrene"—L. V. Parmley, Little Rock.

"Motion Pictures of a Human Heart"—Homer A. Higgins, Little Rock.

GENERAL SESSION

Tuesday, April 21, 8:00 P. M.

Calling the Society to Order—Edward E. Barlow, President.

Invocation—Rev. F. E. Maddox, Texarkana.

Address of Welcome for Texarkana—Hon. S. C. Nancarrow, Mayor of Texarkana.

Address of Welcome for the Miller County Medical Society—A. G. Lee, Texarkana.

Response to the Address of Welcome on Behalf of the Arkansas Medical Society—W. W. Verser, Harrisburg.

President's Annual Address—Edward E. Barlow, Dermott.

MEMORIAL SESSION

Baptist Church (One Block from Hotel)

Wednesday, April 22, 8:30 A. M. to 9:30 A. M.

Conducted by the Committee on Necrology—G. A. Warren, Chairman, Black Rock; J. M. Lemons, Pine Bluff; E. F. Ellis, Fayetteville; E. L. Beck, Texarkana; J. A. Foltz, Fort Smith.

Invocation—Rev. M. T. Andrews, Pastor First Baptist Church.

Address—G. A. Warren, Black Rock.

Music—

SCIENTIFIC SESSION—Continued

MORNING SESSION

Wednesday, April 22, 10:00 A. M.

"The Clinical Significance of Dysphonia"—Homer Dupuy, New Orleans.

"Ocular Glandular Tularemia"—Everett Moulton, Fort Smith.

Subject to be announced—Robert Caldwell, Little Rock.

"Cross Eyes"—K. W. Cosgrove, Little Rock.

AFTERNOON SESSION

Wednesday, April 22, 1:30 P. M.

"Obscure Abdominal Pain, Importance of Careful Urinary Tract Investigation"—J. Hoy Sanford, St. Louis.

"Treatment of Acute Epididymitis and Seminal Vesiculitis"—T. N. Black, Hot Springs.

"Schillings Differential Count"—Lantern slides—M. J. Kilbury, Little Rock.

"The Present Status of the Rheumatism Problem"—O. C. Melson, Little Rock.

"Visceral Syphilis"—A. A. Blair, Fort Smith.

"Diagnosis of Inflammation of the Male Urethra"—Paul Z. Browne, Hot Springs.

"Problems in Infant Feeding"—Paul H. Power, Pine Bluff.

"The Irritable Spastic Colon; a Common Condition Frequently Mismanaged"—G. W. Parson, Texarkana.

MORNING SESSION

Thursday, April 23, 8:30 A. M.

"Radiation in Carcinoma of the Breast"—Ira H. Lockwood, Kansas City.

The Etiology, Symptomatology and the Early Diagnosis of Cancer and the proper time for Surgery and Radiation Therapy will be discussed, with an attempt to classify Carcinoma of the Breast in such a manner that the proper treatment may be given the individual regardless of the hopelessness of the situation. A brief paragraph of the paper will discuss the early Roentgen Diagnosis of tumors of the breast. Lantern slides and exhibit of X-ray films.

Motion Pictures—"The Treatment of a Normal Breech Presentation" (Three Reels).

The Case of Pollenosis: Diagnosis and Treatment—A. C. Cazort, Little Rock.

"Clinical Symptoms in the Prognosis of Tuberculosis"—J. R. Riley, Booneville.

"Oxygen in Gas Gangrene"—S. F. Hoge, Little Rock.

"The Injection Treatment of Varicose Veins"—A. Isom, Dumas.

"Colitis As a Focus of Infection and Its Management"—W. F. Porter, Hot Springs.

"A Plea for the Use of Spinal Anesthesia in Selected Cases"—W. Decker Smith, Texarkana.

Preliminary Program

WOMAN'S AUXILIARY

to the

ARKANSAS MEDICAL SOCIETY

April 21, 22, 23, 1931

Headquarters: Hotel McCartney, Texarkana.

TUESDAY, APRIL 21st

8:00 A. M. Past State President's Breakfast.

8:30 A. M. Registration.

12:00 M. Executive Board Luncheon.

2:00 P. M. Business Meeting.

Call to Order—Mrs. William Hibbitts, President, Bowie-Miller Counties Auxiliary.

Invocation—Rev. J. S. Sleeper, First Presbyterian Church.

Address of Welcome—Mrs. S. A. Collom, Texarkana.

Vocal Solo.

Introduction of State President, Mrs. Charles E. Oates, Little Rock.

Response.

Address of President of Arkansas State Medical Society—Dr. E. E. Barlow, Dermott.

Introduction of Honor Guests.
Reading of Minutes.
Announcement of Committees.
Report of Registration Committee.
Report of Entertainment Committee.

4:00 to 6:00 P. M. Drive over city. Tea at home of Mrs. William Hibbitts, 2524 Wood Street.

WEDNESDAY, APRIL 22nd

8:30 A. M. Memorial Service—First Baptist Church, Fourth and Pine Streets.

9:30 A. M. General Session of Woman's Auxiliary—Watts Hall, First Baptist Church.

Reading of Minutes.

Reports:

State Officers.
State Committees.
County Auxiliaries.
Special Committees.
Report of Woman's Auxiliary to American Medical Association.
Report of Woman's Auxiliary to Southern Medical Association.

Election of Officers.

1:00 P. M. Luncheon and Closing Session at Texarkana Country Club.

3:00 P. M. Executive Board Meeting—Mrs. W. R. Brooksher, Jr., presiding.

THURSDAY, APRIL 23rd

9:00 A. M. Round Table Discussion of County Auxiliary Problems—Hotel McCartney.

(Presidents, Presidents-elect and delegates are expected to be present at this meeting, visitors welcome.)

Auxiliary Notes

BOWIE-MILLER COUNTIES—The Bowie-Miller Counties Medical Auxiliary gave a luncheon at Hotel McCartney, February 27. Mrs. Chas. E. Oates, Little Rock, State President, was honor guest. The large luncheon table was decorated with red tapers and bowls of red and white garden flowers. Mrs. Oates was presented with a corsage.

After the luncheon, Mrs. Wm. Hibbitts presided at the business session. The following officers were elected:

President, Mrs. L. J. Kosminsky; President-Elect, Mrs. H. E. Murry; First Vice-President, Mrs. E. M. Watts; Second Vice-President, Mrs. J. N. White; Third Vice-President, Mrs. Geo. Cole Jr.; Fourth Vice-President, Mrs. A. W. Roberts; Corresponding Secretary, Mrs. L. H. Lanier; Recording Secretary, Mrs. R. R. Kirkpatrick; Publicity Secretary, Mrs. Decker Smith; Treasurer, Mrs. C. E. Kitchens; Parliamentarian, Mrs. E. L. Beck.

Mrs. S. A. Collom read resolutions upon the death of their beloved member, Dr. Nettie Klein.

Mrs. Oates gave a brief talk, discussing plans for the State meeting in April. She stressed ways and means of raising money for the Student Loan fund, and expressed a desire to have the money in time for the spring demand.

UNION COUNTY—Mrs. G. D. Murphy of El Dorado was hostess to the Woman's Auxiliary to the Union County Medical Society, which met at her home, Friday, February 27. Mrs. J. B. Wharton and Mrs. A. D. Cathey were co-hostesses. After a short business session, which included a unique roll call, each member answering by contributing to a story, Mrs. Thrower gave an interesting discussion of "The Menace of the Rat," and Mrs. E. J. Munn concluded with "Adventures of the Fink Family." During the social hour, the hostesses served a salad course.

PULASKI COUNTY—An interesting meeting of the Woman's Auxiliary to the Pulaski County Medical Society was held, February 18, at the home of Mrs. J. R. Wayne, with Mrs. E. H. Wilkes, Mrs. K. W. Cosgrove, Mrs. W. E. Gray, Jr., and Mrs. R. L. Saxon, assistant hostesses. In the absence of

the President, Mrs. Anderson Watkins Mrs. Pat Murphey, Vice-President, presided over the business session, at which time plans were discussed for raising money for the Student Loan Fund. Reports of standing committees were heard.

Miss Frances Gray played two piano selections, after which a social hour was enjoyed. Tea was served in the dining room, where Mrs. Pat Murphey and Mrs. C. E. Witt presided at the serving table. The valentine motif was evidenced in the refreshments. About thirty-five members were present.

INDEPENDENCE COUNTY — The Woman's Auxiliary to the Independence County Medical Society met in Batesville, February 9, at the home of Mrs. L. T. Evans. Mrs. R. C. Dorr assisted in receiving the guests. Nine members were present. Mrs. J. H. Kennerly, President, presided. A letter from the State President, Mrs. Chas. E. Oates, was read and all suggestions were voted upon and all acceeded to.

Mrs. Dorr gave an interesting account of the luncheon given by the Pulaski County Auxiliary to the wives of physicians attending the recent meeting of the American College of Surgeons held in Little Rock.

It has been the policy of the Independence County Auxiliary to limit the program to one paper on some interesting personality or some phase of the work being undertaken by the authorities. At this time, Mrs. C. G. Hinkle gave a resume of the work being done and the work that needs to be done in the county and State in the matter of educating the people to the importance of birth registration.

During the social hour, the hostess served an attractive valentine lunch. "White Elephants" in the form of unfinished pieces of hand work were collected by the chairman of this committee, Mrs. Rodman, who will forward the pieces to headquarters for distribution in the hospital at Fort Roots.

The next meeting will be held in April at the home of Mrs. Frank A. Gray, Batesville.

FAULKNER COUNTY — Mrs. Chas. E. Oates, State President of Medical Auxiliaries, and President-Elect of the Southern Medical Association and Mrs. J. B. Crawford, State Chairman of Hygeia, were in Conway February 19, to attend the meeting of the Auxiliary of the Faulkner County Medical Society, which met at the home of Mrs. I. N. McCollum.

Mrs. McCollum served a delicious hot plate luncheon at the social hour. The rooms where the guests assembled were bright with many bouquets of spring flowers.

ARKANSAS COUNTY—The Woman's Auxiliary of the Arkansas County Medical Society met February 11, at the Spark's Hotel in DeWitt, and had dinner with their husbands.

After dinner, the ladies attended a picture show, following which, a business meeting was held. They voted to give $10.00 to the Red Cross, $5.00 to the Student Loan Fund, and to place Hygeia in the public schools of the county.

Mesdames Hinkle and Carruthers of Little Rock were visitors.

GARLAND COUNTY—Woman's Auxiliary of The Hot Springs Garland County Medical Society met February 16, with a luncheon on the Bay Porch of the Kingsway Hotel. The President, Mrs. Geo. B. Fletcher, presided. Twenty members were present.

Mrs. C. H. Nims gave a very interesting talk on "Women in Medicine." The boys quartette, under the direction of Miss Elizabeth Bowe, gave several selections.

The milk fund supplies undernourished families, and layettes are made for the needy. Plans are being completed for raising money for the Student Loan Fund.

SEBASTIAN COUNTY—Woman's Auxiliary of the Sebastian County Medical Society gave a dinner and bridge party at the Ward Hotel, in Fort Smith, February 4. Thirty-eight members and six guests attended.

PANORAMIC VIEW OF THE WOMAN'S AUXILIARY TO THE A. M. A.

The Eastern District

MRS. W. WAYNE BABCOCK

According to the Constitution of the National Auxiliary the first vice-president is automatically chairman of organization, the three other vice-presidents being organizers for their section of the country. Mrs. Southgate Leigh of Virginia, therefore holds this chairmanship, and the Eastern District is her particular responsibility. At her request a

series of four articles is being prepared by her committee in order that each district may be cognizant of the progress of its own States as well as those of the other three sections. The individual State journals have been generous in extreme in the space they have allowed their auxiliaries and this additional courtesy of reporting the auxiliary situation in other States is deeply appreciated, for there is a growing desire to know "what others are doing."

New Hampshire stands alone as the only New England State 100 per cent organized and cooperating with the National organization. Last year the State auxiliary had misgivings as to its necessity and usefulness but an urgent request from the medical society that the women remain organized, dispelled all doubts. During the year following, Mrs. Hubbard, wife of the State President, visited every county which encouraged and stimulated the growth of unit auxiliaries.

The New Jersey Auxiliary made pilgrimages to State institutions, set apart one meeting when the mothers of physicians were entertained, and sponsored various health meetings. The Essex County Auxiliary, assisted by the physicians, succeeded in establishing a course of health talks, in cooperation with the Y. W. C. A. of Newark, emphasizing especially prenatal care and information which would aid the mothers of babies and young children. Last year Mrs. James Hunter, Jr., New Jersey's State President, visited every county as did Mrs. Walter Jackson Freeman in Pennsylvania, during her presidency. One cannot help drawing the conclusion that personal contacts are necessary for county development and success.

Virginia is active in spots. The doctors encourage the auxiliaries as they believe that through them education with regard to the menace of State medicine can be spread.

Ohio for several years has been sending representatives from a few organized counties to the National meetings but as yet there is no State organization. As our friend and advisor, Dr. Upham, lives in Ohio, it is felt that he will advise the National Auxiliary when the auspicious time arrives for the establishment of a State Auxiliary.

The District of Columbia seems so completely diverted with Washington affairs that the auxiliary which so capably cared for the A. M. A. meetings some years back seems to have gone into retirement.

Delaware in a breathless, better-late-than-never manner, has completely caught up and is most interested and active and has entered upon serious work by assisting the men of the profession in establishing a medical library in Wilmington. They will cooperate with Philadelphia at the time of A. M. A. and the eastern section will introduce them with pride to the National organization. West Virginia is up and doing and you may expect still better things from that State this year.

Maine, Massachusetts, Rhode Island, Vermont and Maryland have reported the interest of individuals but no organized effort. Queries from different localities in New York as to why there is no auxiliary have been answered with the statement that several years ago the House Delagates voted unanimously in favor of the auxiliary and authorized its organization. The same year Connecticut voted favorably but no definite steps have been taken.

Pennsylvania has surely discovered the rhythm in which its auxiliary work is best done, for concrete accomplishments have been turned out regularly, year by year. Of the three thousand dollars contributed last year to the Medical Benevolence Fund more than two-thirds was contributed by the auxiliary. A definite trend toward educational meetings is felt all over the State and socially it is hoped that the carefully formed Philadelphia plans for the next meeting will bring honor and glory to the Keystone State. Not only are the adult members of the auxiliary meeting but a group of the most charming and good-looking daughters of doctors are working together in order that they may know each other and work in unison for the comfort and pleasure of the A. M. A. guests when they come to Philadelphia in May. Verily, who can question the wisdom of the auxiliary, when it brings about so much willing work in behalf of the medical men of the country?

County Societies

PHILLIPS COUNTY

(Reported by M. Fink, Sec.)

The Phillips County Medical Society observed its sixtieth anniversary, December 10, 1930, with a dinner at Habib's Cafe.

All officers were re-elected, which are: President, George R. Storm, West Helena; Vice-President, J. W. Bean, Marvell and

Secretary-Treasurer, M. Fink, Helena. Dr. H. H. Rightor was elected to represent the Phillips County Medical Society at the State meeting, and Dr. Allen E. Cox was named as alternate delegate.

Dr. W. C. Russwurm and Dr. H. H. Rightor were named to the governing board of the Helena Hospital.

The time and place for the regular monthly meetings were changed to the Chamber of Commerce, the first Tuesday of each month.

In Memory of Dr. John W. Bean
(Phillips County Medical Society)

We have come together today to do honor to the memory of a respected citizen and a beloved colleague. John W. Bean was a man who combined in rare proportions the ability to interpret nature, a genuine interest in human kind, and understanding of the meaning of learning, and appreciation of the value of practical methods in the solution of life's problems, and a talent for our profession compounded of tact, sympathy, poise, firmness and good judgment. These traits of character and of personality made of him a good doctor whose usefulness to his people will be increasingly understood through the years.

The admiration of our Society for his ability was no less than their love for him as a friend and their respect for him as an associate. Kindly interested, tolerant, faithful, honest and public-spirited, he made and retained a large group of friends drawn from citizens in every walk of life within our community.

Appropriately may it be said of him that he was an honorable and wise physician, a good and just man.

We, therefore, offer the following resolutions, and pray that they may be spread upon the minutes of this Society, as a testimonial of the esteem in which he was so affectionately held; that a copy be sent to his family, and also published in the Helena World.

Resolved: That in the death of John W. Bean, our community has lost an earnest, upright and able doctor; the medical profession, a kind, generous and lovable companion and brother; and the State a citizen of fine character, noble purposes, and exalted ideals.

W. R. Orr, M. D.,
H. H. Rightor, M. D.
W. C. Russwurm, M. D.
Committee.

ST. FRANCIS COUNTY
(Reported by J. O. Rush, Sec.)

St. Francis County Medical Society met in regular monthly session in the courthouse in Forrest City, February 10, 1931.

Present: Boggan, Polk, Brown, Caldwell, McCown and Rush of Forrest City; Hall of Wheatley; McClendon of Palestine; Davis of Chatfield; Powell of Round Pond and Winter of Widener.

Minutes of the last meeting were read and approved.

There was discussion regarding Public Health measures, and it was the concensus of opinion of the Society that they use their efforts towards the securing of their prorata for the recent appropriation made by the Federal Government. To further this end, the following resolution, as suggested by Dr. Winter, was adopted and ordered spread on the minutes, and that the secretary comply with the suggestions in the resolution:

Resolved, that we, the members of the St. Francis County Medical Society, endorse Public Health activities as pertaining to Arkansas, and that we urge the State Legislature, now assembled, to sponsor an appropriation to match the appropriation offered by the Federal Government for the carrying out of the contemplated Public Health program.

Resolved Further, that a copy of this resolution be presented to our Representative and Senator, and to Dr. C. W. Garrison, State Health officer.

Much discussion was had regarding the system of collections followed generally by the doctors in the county. The custom being that the doctors render their bills once a year and often fail entirely in collections, especially during the "short crop years."

A resolution, proposing a change in this system was proposed by Dr. Winter and the matter finally resulted in the resolution being presented and the secretary was instructed to see each physician in the county for his approval or rejection, and report be made at the March meeting.

Dr. Davis presented to the Society, Mr. George E. Parker, the County Red Cross Chairman, and asked for him the privilege of the floor, which was promptly and heartily granted. Mr. Parker spoke at much length and gave every phase of the activities of the Red Cross work, asking for a fuller measure of cooperation of the members of the Society in caring for the sick among the needy.

The secretary was instructed to arrange a scientific program for the March meeting, securing one member of the profession from out of the county and at least two members from the county to prepare papers, and arrange for discussion of same. The Society adjourned to meet March 10, at 3:00 p. m.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in regular session at Osceola, February 10, 1931, with the President, Dr. Paul L. Tipton, presiding.

The following were present: Denton and Hutchens of Manila; Hosey of Joiner; Johnson of Bassett; Hudson of Luxora; Ellis and Barrett of Wilson; Saliba, Tipton, Washburn, Wilson, Johnson, Husband and Smith of Blytheville; Mawwey, Harwell and Sheddan of Osceola.

The Society voted to go on record as protesting against the amount of free service which they have been called upon to do during the present panic. While they do not object to rendering service to strictly charity cases, but feel that they are being discriminated against, as everyone else who has a commodity to dispose of receives pay, and as the doctor's service is his stock in trade, he should receive some remuneration.

The scientific program consisted of:

"Non-Suppurative Myositis"—Dr. V. R. Fox.

"Tularaemia"—Dr. W. J. Sheddan.

Both papers were well-prepared and very interesting. Refreshments were served after adjournment.

TRI-COUNTY MEDICAL SOCIETY UNION, OUACHITA AND COLUMBIA COUNTIES

(Reported by R. B. Robins, Sec.)

The Tri-County Medical Society met Tuesday night, January 20, 1931, at the Randolph Hotel in El Dorado. A delightful banquet and musical entertainment preceded the scientific program. The program follows:

"Embolism," by Dr. G. E. Cannon, Hope.

"Some Practical Diagnostic Observations," by Dr. Joseph Knighton, Shreveport.

"Epidural Infections of the Spinal Cord with Case Report," by Dr. A. D. Cathey, El Dorado.

"Birth Control," by Dr. H. H. Nichuss, El Dorado.

Officers elected were as follows: President, S. J. McGraw, El Dorado; Secretary, R. B. Robins, Camden. The next meeting will be held in June, in Magnolia.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in Blytheville, March 10, with the following present:

Ellis of Wilson, Harwell of Osceola, Hudson of Luxora, Owen of Armorel, Luckett and Tidwell of Dell, and Saliba, Johnson, Washburn, Usrey, Sims, Tipton and Smith of Blytheville. Visitors: R. E. Martin, Senath, Missouri; E. G. Cope, Hornersville, Missouri; J. A. McIntosh, C. H. Sanford and H. B. Everett, Memphis, Tennessee.

The program was as follows:

"Endocrine Disorders," Dr. Conley H. Sanford, Memphis.

"Symptomatic Laboratory Suggestions," Dr. J. A. McIntosh, Memphis.

The next meeting will be in Osceola the second Tuesday in April.

Post-graduate Course *and* Clinical Conferences

The St. Louis Clinics will give a two weeks' Post-Graduate Course and Clinical Conference, June 15 to 26, 1931.

These Will be Different from Most Post-graduate Courses

In addition to daily clinics given in the St. Louis hospitals by well-known teachers, there will be luncheon conferences at which clinical problems will be discussed and an interchange of opinions made possible.

Write for Detailed Information

ST. LOUIS CLINICS

3839 Lindell Boulevard

ST. LOUIS, MO.

The Secretary of the County Society will please notify the State Secretary immediately of any error or change in these officers.

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OF THE

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1931

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Original Articles

INDIVIDUALISM IN MEDICINE

A. G. Henderson, M. D., Jonesboro

To practice medicine properly, one must assume the responsibility for his patient, "He must remember that on his human understanding and on his personal advice and encouragement and explanation depends the patient's health and future." He cannot pass the duty to another. He must make use of an increasing number of special methods of study, which often have to be pursued by colleagues; but in making use of these he must do so intelligently, consulting with his colleagues. Only in such manner can he obtain the full assistance which he desires. Cooperation in the mere sense of division of responsibility is not cooperation.

The doctor consulted by the patient must still regard himself as the patient's individual adviser if he desires to do his whole duty and obtain the best results.

He will practice better medicine who cooperates with his colleagues in the sense of uniting, perhaps, with a number of other practitioners, who between them support those laboratories and technicians necessary to supply them the desirable physical, clinical, bacteriological and serological assistance; who takes the responsibility of his own patients, who determines his consultations, and chooses his consultants according to the individual conditions; who remembers that the practice of medicine is an affair between two human beings in which the human element is all important and cannot be avoided; that the practice of medicine is a profession; that he who seeks to make it a business or a trade has mistakened his calling.

The physician's problem is to restore his patient to health, efficiency and earning power at the earliest possible moment. Today, there is a tendency to discourage over specialization in clinics.

The medical clinics are distributing centers, as well as a diagnostic focus. They manifest an appreciation that good professional equipment and well-devised machinery of organization can do little more than to create conditions under which the trained physician can do effective work. They recognize that to achieve results with the sick the personal interest of the doctor in the patient and the personal confidence of the patient in the doctor must be developed and maintained in the clinic. Individualism in medicine personnel-personality, as opposed to that growing experience for the sick to have to shop around for a cure.

The cooperation of the medical profession with the Red Cross furnished to many medical men the opportunity of seeing in one week more wounds, fractures, abrasions and contusions demanding up-to-the-minute treatment with makeshift appliances, than the most assiduous physician in the crowded city might happen upon in a year. Here, too, were concentrated on a great scale the problems that fall within the scope of public health work, sanitation, disease prevention and immunization. Many medical men profited personally by their contact with emergencies of this sort and kind, in a way that added considerably to their professional stature. Necessity brought into play many aids to medicine and surgery which would otherwise have been dormant, and contributed largely to the successful handling.

In every disaster, whether war or otherwise, the medical and hospital care of the sick and injured is the responsibility of the local physicians, and ultimately expresses itself in a normal relationship between the physician and patient. Individualism in Medicine.

In major disasters, representatives of the United States Public Health Service, the Medical service of the United States Navy and Army are called. By the way, the medical men of the United States Navy and Army are among the greatest medical men in the world. This is made possible by the tenure of their office. In England, France and Germany these men are selected through favoritism.

When this country entered the World War in April, 1917, the first request of the Allies was for doctors. It is interesting to note that the first American to fire a shot at the enemy after the entry of the United States in the war, was Dr. John Louis Borsch, a plastic eye surgeon, well-known in Europe. The first American wounded was an Army surgeon, Lieut. Louis J. Gennella, July 14, 1917. Lieut. William T. Fitzsimmons was the first member of the American Expeditionary Forces to lose his life in the war. He was killed September 4, 1917. The Army General Hospital at Denver, for the treatment of tuberculosis has been named the Fitzsimmons General Hospital in his honor. The last flag to be taken down in Europe, February 19, 1923, was by an Army surgeon, Major M. A. Reasoner.

PRACTICAL APPLICATIONS OF BLOOD CHEMISTRY IN UROLOGICAL CONDITIONS

Drs. H. King Wade *and* H. Clay Chenault
Hot Springs National Park

One of the most valuable aids in diagnosis, treatment and prognosis in medicine today is the modern micro-chemical method of blood analysis. Its aid has been pioneered by the urologists of today, and coupled with modern urological equipment and kidney function tests, lends itself in yearly decreasing the mortality, both in medical and surgical cases.

Before considering the different and multiple phases of bio-chemistry, one should consider metabolism as a whole, especially protein metabolism. The end products of protein metabolism are excreted chiefly by the kidneys, and are found in the normal urine. The kidneys are well able to take care of a relative increase or decrease of body metabolism, but as the body grows older, or due to indulgences on the part of the patient, or disease, the kidneys begin to lose their ability to excrete metabolites properly. It is the diseased kidney that interests the physician and the extent of the disease should be of more interest because the patient wants to know his exact fate, and more information can be given in regard to the treatment. Any method by which additional information can be given by the physician should be used. Before considering the chemistry of the blood one should be acquainted with the fundamental and academic facts of the variable constituents of the blood and their normal ratio in health and disease, the many renal function tests, their application and interpretation. The strict normal values for the constituent elements are as follows:

Non-proteid nitrogen	25-35 mg.	100 cc.
Urea nitrogen	10-15 mg.	100 cc.
Uric acid	2 -4.5 mg.	100 cc.
Creatinine	1 -2.5	

Carbon dioxide combining power, 50-70 per cent by volume.

Chlorides, 562-625

The average normal for series of cases of different ages.

Ages from

10 to 13—Non-proteid nitrogen 29.
Creatinine 1.32

20 to 40—Non-proteid nitrogen 34.4
Creatinine 1.41

60 to 80—Non-proteid nitrogen 40.3
Creatinine 2.3

The average normal on a series of cases where blood chemistry was done before and after an average breakfast.

Before: Non-proteid nitrogen average 35.

1½ hours after breakfast: Non-proteid nitrogen average 39.5.

The first of the circulating nitrogenous substances to be considered is non-protein nitrogen. After the hemaglobin and other circulating proteins are removed by precipitation

from the blood, there remains a number of nitrogenous substances which constitute the total non-protein nitrogen. These substances are first, urea; second, uric acid; third, creatinine. There are other nitrogenous substances in the blood, but it will be needless to mention them because of their relative unimportance. With the above facts in mind, the factors that make up non-protein nitrogen, it will be well to consider each separately.

The first to consider is urea nitrogen which usually accounts for about half of the nitrogen in non-protein nitrogen. Urea is formed chiefly by the liver from animo acids which are the end products of protein metabolism and excreted by the kidneys. Therefore, any marked derangement of kidney function is immediately answered by a prompt rise in urea nitrogen. This rise is constant and entirely dependent upon the renal embarrassment. The determination of urea nitrogen in the blood stream, therefore, should be a good method of determining the functional ability of the kidneys. Of course in mild cases of nephritis the above statement does not hold on account of the elasticity of renal function. More delicate renal function tests should be employed.

The second substances to be considered is creatinine, the origin of which is not definitely known, but its precursor is creatin, which is formed in some unknown manner within the body. It is a known fact, however, that the kidney excretes creatinine more easily than any other of the nitrogen containing groups. Now this fact is of importance in determining the renal function. The creatinine in the blood does not begin to be increased until there is a marked degree of urea nitrogen retention. It is therefore a most valuable test in determining the seriousness of renal destruction. In fact, if urea nitrogen could be called a qualitative test of renal function, then creatinine could be called a quantitative test of renal function. Again its gradual rise is always noted in uremic and toxic poisoning cases when the destruction of the parenchymal renal tissue is progressive in nature, and therefore is of great prognostic value, depending of course upon the known existing pathological condition.

Uric acid is the third of these nitrogenous substances to be considered and is formed in the normal body chiefly from nucleo proteins which are taken as food, and the normal limit can be increased experimentally by the intake of larger quantities of foods rich in nucleo proteins. Its rise is noted in derangement of purine metabolism such as gout and its increase as a true diagnostic agent is limited to the condition above mentioned. Of course there is always an increase in the uremic state, and its rise is always noted in cases of renal damage.

The acid base equilibrium of the body may be determined by the carbon dioxide combining power of the plasma. The actual hydrogen iron concentration of the blood plasma may be determined, but the same information may be obtained by determining the carbon dioxide combining power. The terminal picture in the usual uremic cases is one of acidosis. Ketogenesis and acidosis are associated with diabetes of the more severe type. Alkalosis may and frequently does result from the indiscriminate use of alkalies, and should be guarded against. The blood chlorides are lowered in intestinal obstruction and frequently high in nephritis, especially the terminal type.

Surgery of the genito-urinary tract whether it be directed toward the kidneys and ureter, the bladder, the prostate, whether we are dealing with stone, congenital malformation, malignancy, infection or hypertrophy of the prostate, should never be attempted before a very comprehensive examination of the blood with special regards to nitrogen retention. There are certain flexible limits in which surgery may be attempted. It is always safer to operate within the lower limits, but frequently the surgeon must take chances hoping for a return to normal following his efforts. Generally speaking, if the urea nitrogen is below 20 mg. per 100 ccs. the patient is classified as a good risk. When the urea nitrogen climbs to from 30 to 40 the operative risk is greater and mortality rates are lowered if the patient is given several days treatment directed to relieve the nitrogen retention.

In this connection it might be well to cite the value of creatinine as a prognostic agent. In a series of cases of nephritis where the creatinine was above 5 mg. per 100 ccs. not one case survived regardless of treatment. In certain toxic and chemical poisoning cases with creatinine above 5 mg., a small percentage live and in cases of acute obstruction or retention in the genito urinary tract the creatinine may reach a higher level and after the condition is rectified the creatinine may

return speedily to lower levels, due of course and depending upon the ability of the kidneys to take up their normal function.

To summarize:

1. Blood chemistry and renal function tests are invaluable in diagnosis of parenchymal renal disease.

2. The nitrogenous constituents vary with age and following ingestion of food.

3. Creatinine determination is of value in determining the prognosis of the case.

4. Surgery of the genito urinary tract should never be attempted before complete blood chemistry is done and the findings evaluated.

ADVERTISING AND THE DOCTOR

Although the great American god "Advertisia" apparently controls most of our activities and our interests, it has not thus far succeeded in gaining a complete overlordship in the field of medicine. True, the use of the health claim for the advertising of antiseptics, tooth pastes, foods and most household utilities has become a popular means of approach to the "health-conscious" public. True, some clinics still promote their services to the indigent and the middle class by extensive announcements in the public press; for this, however, the plea of holy charity is used in extenuation. Again and again, advertising agents seeking some new outlet for the practice of their art have developed campaigns to be financed by medical societies or by individual physicians with a view to placing the wares of the medical profession before the public, as the services of musicians, plumbers, electricians and bakers are advertised. Thus far few medical societies of importance have succumbed to the lure of such promotions.

Several years have passed since various county medical societies in one of the States purchased space to announce some well established facts regarding the prevention of disease. The evidence thus far available indicates that the campaign was not particularly successful in enlightening the public or in bringing increased financial returns to the members of the societies that paid for the campaign. Not long ago several county medical organizations combined with some philanthropic organizations to promote a newspaper campaign for the advancement of the periodic health examination by the family physician, and incidentally by several pay clinics. As far as any information is available there is little evidence that this campaign resulted in any clearly defined saving of lives, any decreased morbidity or any increase in the emoluments of the medical profession.

Reports have reached the headquarters office of the Association to the effect that the compilers and salesmen of this series of advertisements have been visiting newspaper editors in various communities with the suggestion that they induce the county medical society to purchase space for the publication of these announcements. It is reported that some of these salesmen have conveyed the impression that their entire plan has been officially approved by the American Medical Association. This is not true.

The Journal of the American Medical Association feels that expenditure of the funds of a county medical society for advertising announcements planned primarily to teach the facts of preventive medicine is not a proper expenditure for a medical organization. Medical education of the public is just as much a function of the press as education in the rules of contract bridge, the technic of golf or the proper training of children. The threat of any newspaper that it will omit scientific news of importance in the field of medicine unless physicians purchase advertising space is an idle threat. Any newspaper worthy of the name must publish scientific news. The vast majority of competent editors are convinced that few other news items are of equal significance at the present day. The newspaper that is dominated in its news columns by its advertising department is on the road to ruin.

The question of the publication of newspaper advertisements by county medical societies would appear not to be so much a question of medical ethics as one of common sense in the field of business. From this point of view, the burden is on the promoter to prove that the spending of money for such announcements provides an adequate return to the purchaser of the announcement, or to the public that such announcements are planned to serve.—Jour. A. M. A., March 7, 1931.

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

IMPORTANT AMENDMENT TO STATE LAW

An important change in the classification of demands against the estates of deceased persons was made in the session of the Legislature just closed. The law before the enactment of Senate Bill No. 325 by Dr. George, classified demands against estates into five classes. If the claims of the first class exhausted all the assets of the estate, those creditors in the other classes could obtain nothing.

The first classification included only funeral expenses, while the second class included expenses of the last sickness, wages of servants and demands for medicines and medical attendance during the last sickness.

The part of the new law which is applicable to the profession, reads as follows: "1st. Funeral expenses. Expenses of the last sickness, wages of servants, and demands for medicines, medical and surgical attention, nursing and hospitalization during the last sickness."

To state the change in the law in a different way, heretofore funeral expenses took precedence over all other claims, and if this item exhausted all the assets of an estate, there was nothing left for the druggist, the nurse, the doctor and the hospital, for services and materials furnished during the last illness. Now, all these demands, together with the undertaker are put in the first class, and exclusively comprise the first class.

The bill was introduced in the Senate by Dr. George of Centerville, Yell County, and credit of the profession is due to him, and likewise in a very large degree to the five members of our profession in the House, namely, Drs. L. D. Duncan, of Waldron, Scott County, S. A. Turner, of Heber Springs, Cleburne County, W. H. Toland of Nashville, Howard, County, Morgan Smith of Little Rock, and Erskine Smith of Pocahontas, Randolph County.

2,500 000 DROUGHT VICTIMS WELL FED BY RED CROSS

Nearly 2,500,000 persons in 22 States came under the care of the American Red Cross as a result of drought. Relief operations were the most extensive in 50 years of aiding victims in more than 1,000 disasters.

Relief assumed various forms: Food and feed, clothing, seed for pastures and gardens, medical supplies, hot lunches in schools.

Only 340 professional workers were employed on the huge task—the rest were volunteers. Local Chapters taxed their resources to the utmost before asking for funds from the National Headquarters.

As early as last September, the Red Cross began distributing to more than 58,000 families seed for pastures and to more than 27,000 families seed for kitchen gardens, in anticipation of the emergency. The expenditure for this purpose amounted to $326,800.00. Green vegetables were thus made available up to the first of January, and stock was kept alive for several months.

A second garden program got under way in February, and 537,000 packages of seed were distributed. Quarter-acre plots were planted to beans, beets, cabbage, carrots, collard, sweet corn, kale, lettuce, mustard, okra, onions, peas, spinach, squash, tomatoes and turnips.

Feeding provided balanced and adequate rations. Red Cross nutritionists, together with Department of Agriculture experts, made it effective in preventing malnutrition and setting up a resistance to disease. Hot lunches were served in many schools. One day the children were given vegetable soup and bread, another day a thick beef stew with vegetables, a third day milk or cocoa with sandwiches.

In some instances, instead of serving lunches in the schools, children of school age were provided for in additional rations to families. Food orders included such lunch materials as peanut butter, raisins, prunes and tomatoes.

County health officers and private physicians commended the adequacy of rations procured on orders issued by Red Cross Chapters, which were filled at local stores. Besides the usual staples, such as corn meal, flour, lard, meat, beans and potatoes, such items as canned salmon, cabbage, tomatoes, vegetables and milk were provided, each order being adapted to the special needs of the family for whom it was issued. Where pellagra threatened, yeast and other preventives were made available.

More than 500 carloads of foodstuffs were contributed. These were hauled free by the railroads, as their contribution to the cause. Shipments ranged from live poultry to fish, from grain to grapefruit, and included carloads of flour, eggs, beans, vegetables, onions rice and corn.

States involved were: Alabama, Arkansas, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Montana, North Carolina, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, and West Virginia.

THE TRAINING OF HEALTH OFFICERS

In a recent report the United States Public Health Service emphasizes that the administrative health officer should be trained for his work. This training should cover fundamentals and afford an opportunity to acquire experience in the practical conduct of the work of a health department. A course of this type will necessitate a close co-ordination of a teaching institution and an administrative health organization. However, such training facilities are not likely to be used extensively unless a system is perfected which will provide means whereby training can be made readily available, and unless there be some provision for making training a qualification for employment and advancement. The State health department seems to be the agency best able to sponsor a plan of training; however, the actual teaching should be under the management of an educational institution such as a department of preventive medicine in a medical school or a school of hygiene. The local health agencies should cooperate, particularly for the purpose of making available their facilities for acquiring experience in practical public-health administration. An approach to the whole subject of training on a comprehensive basis was begun in Tennessee during the Spring of 1928 under the joint auspices of the department of preventive medicine of Vanderbilt Medical School and the Tennessee State Department of Public Health. Experience up to the present time indicates that it will be successful. A similar plan is under consideration in at least one other State. It should be possible to adopt this plan or certain modifications of it in any State if the State health department participates in local health service and can affiliate

with a teaching institution which is in position to assume responsibility for the administration of the course as well as a major part of the actual teaching.

Abstracts

INDISPENSABLE USES OF NARCOTICS

Morris Fishbein, Chicago (Journal A. M. A. March 14, 1931), presents the introduction to a series of articles on the indispensable uses of narcotics that are to be published in The Journal and then republished in book form. He believes that the problem of narcotic addiction merits the attention of physicians for many reasons. The control by statute of the prescribing of alcohol, and the definite limitations of the amount prescribed, indicates that the medical profession must do everything possible to minimize the prescribing of narcotics in order to make unnecessary further restrictive measures. Physicians should give more serious consideration to the materia medica, pharmacology and therapeutics of narcotics. Physicians may, by the exercise of more thought in practicing, do much to avoid censure in relation to narcotic addiction. They may substitute, whenever possible, nonhabit-forming drugs in the place of morphine or other opium alkaloids. When narcotics are indispensable, however, as shown in this series of articles, no more should be administered than is necessary to achieve the desired end. Patients requiring daily administration should be seen often by the doctor and the amount of drugs ordered or supplied should not exceed that required by the patient until seen again. Independence of administration on the part of nurses should be strictly limited to prescription and any change in treatment should be in writing. The patients should never be informed of the nature of the drug used, nor of the dose of drug administered. The patient should never be permitted to administer the drug hypodermically to himself. Use of the drug should be discontinued immediately when no longer required, and if craving has resulted, close supervision and appropriate treatment should be maintained until the patient has been rendered independent of the drug.

INDISPENSABLE USES OF NARCOTICS:

Narcotics in Surgery

Elliott C. Cutler and John W. Holloway, Cleveland (Journal A. M. A., March 14, 1931), state that surgeons are concerned only with drug addiction due to cocaine and morphine. All the cases that they have seen, as well as much of the material published, lead them to look on the "addict" as an individual with a perverted and degenerate personality, although obviously certain reservations must be made. Nevertheless, their views are rather fatalistic about such personalities. Still it behooves surgeons to share in the general and desirable effort to keep habit forming drugs from such individuals. Cocaine needs no further comment. Its use is justified only in surface applications. As to morphine, they believe that from the standpoint of the surgeon it is the most valuable drug in the pharmacopeia, that it is essential in trauma and in certain very painful crises, that it should seldom be administered until a diagnosis can be made, and that in the preoperative and postoperative care of patients its use may be reduced by a proper study of substitutes.

BEWARE THIS SOLICITOR

St. Joseph, Mo., March 30, 1931.

To the Editor:

On February 23, this year, a solicitor victimized a number of physicians in St. Joseph. His plan was to solicit subscriptions to Harpers' and other magazines and to offer sets of books as premiums. The subscription blank called for the payment of $9.70 in ninety days. He was supplied with blanks, samples of binding and everything to indicate that he was a bona fide magazine salesman.

After he had secured the signature on the subscription blank, he explained in an indifferent manner that if the subscriber cared to pay cash, or by check, there was a discount of $1.00, and the check could be made payable to "Harper Brothers Publishing Co.," the name printed on the subscription blank. The doctors "fell for it" and the next day he cashed the checks at a local bank and departed. He used the name T. T. McLean while here but has also used the name Leroy Dale.

Correspondence with the National Publishers Association, 15 West 37th St., New York, indicates that this person has been defrauding physicians in the Middle West for several months.

Announcements and Program

FIFTY-SIXTH ANNUAL SESSION

of the

ARKANSAS MEDICAL SOCIETY

TEXARKANA

APRIL 21, 22, 23, 1931

Official Call

To the Officers, Delegates, Committeemen and Members of the Arkansas Medical Society:

GREETING:

The Fifty-sixth Annual Session will be held at Texarkana, in the Grim Hotel, Tuesday, Wednesday and Thursday, April Twenty-first, Twenty-second and Twenty-third, Nineteen Hundred and Thirty-one.

The House of Delegates will convene at 9:30 a. m., Tuesday, April 21st.

The Scientific Session will open at 1:30 p. m., and the General Session will be at 7:30 p. m. and subsequently, according to the program.

E. E. BARLOW,
President.

WM. R. BATHURST,
Secretary.

OUR PRESIDENT

E. E. BARLOW, M. D., F. A. C. S.
Dermott

OUR GUESTS

Ralph A. Kinsella, St. Louis.
Homer Dupuy, New Orleans.
J. Hoy Sanford, St. Louis.
Ira H. Lockwood, Kansas City.
Victor Murdock, Wichita, Kansas.

OFFICERS

President—E. E. Barlow, Dermott.

President-Elect—D. A. Rhinehart, Little Rock.

First Vice-President—Wm. H. Mock, Prairie Grove.

Second Vice-President—H. B. Hardy, Greenbrier

Third Vice-President—J. B. Ellis, Helena.

Treasurer—R. J. Calcote, Little Rock.

Secretary—Wm. R. Bathurst, Little Rock.

COUNCILORS AND COUNCILOR DISTRICTS

First District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties. Councilor, W. W. Verser, Harrisburg. Term of office expires 1931.

Second District—Cleburne, Fulton, Independence, Izard, Jackson, Sharp and White Counties. Councilor, L. T. Evans, Batesville. Term of office expires 1932.

Third District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff Counties. Councilor, M. C. John, Stuttgart. Term of office expires 1931.

Fourth District—Ashley, Bradley, Chicot, Cleveland, Drew, Desha, Jefferson and Lincoln Counties. Councilor, H. T. Smith, McGehee. Term of office expires 1932.

Fifth District—Calhoun, Columbia, Dallas, LaFayette, Ouachita and Union Counties. Councilor, L. L. Purifoy, El Dorado. Term of office expires 1931.

Sixth District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier Counties. Councilor, C. A. Archer, DeQueen. Term of office expires 1932

Seventh District—Clark, Garland, Grant, Hot Springs, Montgomery, Saline and Scott Counties. Councilor, Dewell Gann, Sr., Benton. Term of office expires 1931.

Eighth District—Conway, Faulkner, Johnson, Perry, Pope, Pulaski and Yell Counties. Councilor, M. E. McCaskill, Little Rock. Term of office expires 1932.

Ninth District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren Counties. Councilor, W. H. Poynor, Harrison. Term of office expires 1931.

Tenth District—Benton, Crawford, Franklin, Logan, Madison, Sebastian and Washington Counties. Councilor, S. J. Wolfermann, Fort Smith. Term of office expires 1932.

Delegates to the A. M. A.—William R. Bathurst, Little Rock (1931); E. F. Ellis, Fayetteville (1932).

COMMITTEES

SCIENTIFIC PROGRAM

R. J. Calcote, Little Rock, Chairman; D. W. Goldstein, Fort Smith; Wm. R. Bathurst, Little Rock.

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Fort Smith, Chairman; L. J. Kosminsky, Texarkana; H. H. Rightor, Helena.

MEDICAL LEGISLATION

H. B. Hardy, Greenbrier, Chairman; W. M. Majors, Paragould; C. S. Holt, Fort Smith; S. W. Douglas, Eudora; D. A. Rhinehart, Little Rock; L. V. Parmley; Little Rock; M. L. Norwood, Lockesburg.

HEALTH AND PUBLIC INSTRUCTION

F. O. Mahony, El Dorado, Chairman; H. T. Smith, McGehee; W. G. Hodges, Malvern; A. F. Hoge, Fort Smith.

NECROLOGY

G. A. Warren, Black Rock, Chairman; J. M. Lemons, Pine Bluff; E. F. Ellis, Fayetteville; E. L. Beck, Texarkana; J. A. Foltz, Fort Smith.

CANCER CONTROL

Dewell Gann, Jr., Little Rock, Chairman; T. F. Kittrell, Texarkana; Rufus Martin, Warren; J. S. Wilson, Monticello; W. B. Bean, Marianna.

INFANT WELFARE

Morgan Smith, Little Rock, Chairman; H. H. Niehuss, El Dorado; H. A. Ross, Arkadelphia; Paul H. Power, Pine Bluff; R. B. Robins, Camden.

HOSPITALS

M. E. McCaskill, Little Rock, Chairman; L. M. Lile, Hope; S. M. Gates, Monticello; W. V. Laws, Hot Springs; Wm. A. Snodgrass, Little Rock.

PUBLICITY

Geo. B. Fletcher, Hot Springs, Chairman; S. F. Hoge, Little Rock; H. E. Murry, Texarkana; Thad Cothern, Jonesboro.

LOCAL COMMITTEES FOR MEETING OF THE ARKANSAS MEDICAL SOCIETY IN TEXARKANA

General Chairman, L. J. Kosminsky

HOTELS

S. A. Collom, Sr., Chairman; T. F. Kittrell, S. A. Collom, Jr., A. G. Lee, G. W. Parsons.

ARRANGEMENTS

J. K. Smith, Chairman; W. Decker Smith, J. T. Robinson, Frances Spinka, F. M. Lennard.

ENTERTAINMENT

H. E. Murry, Chairman; H. C. McAdoo, C. A. Smith, E. M. Watts.

PROGRAM (Includes Golf)

C. E. Kitchens, Chairman; L. P. Good, N. B. Daniel, H. H. Smiley, R. R. Kirkpatrick.

RECEPTION

William Hibbitts, Chairman; R. H. T. Mann, Albert Mann.

FINANCE

Preston Hunt, Chairman; T. E. Fuller, W. P. Gardner, E. L. Beck, G. W. Cale, J. N. White.

PUBLICITY

J. F. Williams, Chairman; Joe E. Tyson, A. W. Roberts, R. F. Baskett, H. R. Webster.

MEETING PLACE

H. E. Longino, Chairman; B. C. Middleton, M. L. Richardson, R. R. Dale, L. H. Lanier, K. M. Kelly.

ANNOUNCEMENTS

REGISTRATION

The registration desk will be located in the Grim Hotel and open from 8:00 a. m. to 6:00 p. m.

The delegates are requested to register as early as possible, so that the official roll of the House may be made up and that the House of Delegates may proceed with its business, beginning promptly at 9:30 a. m. Members and visiting ladies are also requested to register and receive the official badge and program.

The members of the Woman's Auxiliary may register either at the Grim or the McCartney Hotels and receive a program and the official badge of their organization.

All meetings of the House of Delegates and Scientific Sessions will be held in the Grim Hotel.

MEETING OF COUNCIL

The Council of the Arkansas Medical Society will meet at noon each day with luncheon in the private dining room, Grim Hotel, immediately following the adjournment of the morning sessions.

COMMERCIAL EXHIBIT

A number of high-class commercial exhibits will be on display in the Grim Hotel, near the place of registration, and our members are urged to visit this interesting exhibit of books, instruments, office equipment and products of many manufacturing plants.

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Chairman

The Scientific Exhibit will be displayed in the Grim Hotel, conveniently accessible to those in attendance.

The exhibit will be as follows:

U. S. Public Health Service, Washington, D. C.—Exhibit on Tularemia and Undulant Fever.

Dr. D. A. Rhinehart, Little Rock—Air and Gas in the Soft Tissues—Roentgenological Diagnosis.

Holt-Krock Clinic, Fort Smith—Pathological Specimens.

Dr. Ira H. Lockwood, Kansas City, Missouri—Exhibit of Roentgenograms Showing Metastatic Changes Secondary to Carcinoma of the Breast and of the Early Roentgen Diagnosis of Tumors of the Breast.

American Heart Association, New York City—Exhibit Illustrative of the Work of the Association—16 Heart Drawings.

American Society for the Control of Cancer, New York City—Statistical Exhibit—Pamphlets for distribution.

GOLF

Texarkana Country Club and U. C. T. Golf Links

C. E. Kitchens, Chairman

The local golf committee has arranged with the Texarkana Country Club and U. C. T. Links for the use of their golf courses for all members and visitors during the session.

Those wishing to play are requested to sign up when they register.

The Dewell Gann, Jr., Silver Cup will be the prize for high score.

CIVIC CLUBS

Grim Hotel

The following civic clubs will meet during the session and have extended a cordial invitation to the visiting members of these respective clubs who attend the Convention.

Tuesday Noon—Rotary Club, 12:00.

Wednesday Noon—Kiwianis Club, 12.00.

Thursday Noon—American Legion Executive Committee, 12:00.

TO VISITING PHYSICIANS

The Arkansas Medical Society always welcomes visitors at the Annual meeting. We have assurance that there will be a considerable number of visitors at this meeting from Louisiana, Texas, and Oklahoma, and we want you to enjoy the meeting. Every member of the Miller County Medical Society is a member of the Reception Committee, and will have appropriate badges. If you want any information ask any member of this big committee.

ENTERTAINMENT

Wednesday, April 22, 8:00 P. M.

Grim Hotel

PRESIDENT'S RECEPTION

Vaudeville. Music. Dancing. Cards.

PROGRAM

HOUSE OF DELEGATES

First Meeting, Grim Hotel—April 21, 9:30 A. M.

Meeting called to order by E. E. Barlow, President.

Calling roll of Delegates.

Appointment of Credentials Committee and their report.

Introduction of Fraternal Delegates—

Adoption of the Minutes of the Fifty-Fifth Annual Meeting as published in the July, 1930, issue of the Journal of the Arkansas Medical Society.

Appointment of Reference Committee.

President's Address to the House of Delegates.

REPORT OF COMMITTEES

Scientific Program—R. J. Calcote, Chairman.

Scientific Exhibit—W. R. Brooksher, Jr., Chairman.

Medical Legislation—H. B. Hardy, Chairman.

Report of our Legal Advisor—Hon. Peter A. Deisch.

Necrology—G. A. Warren, Chairman.

Publicity—Geo. B. Fletcher, Chairman.

Cancer Control—Dewell Gann, Jr., Chairman.

Infant Welfare—Morgan Smith, Chairman.

Hospitals—M. E. McCaskill, Chairman.

Arrangements—L. J. Kosminsky, Chairman.

Report of the Council—Dewell Gann, Sr., Chairman.

Report of the State Board of Medical Examiners—S. J. Allbright, Secretary.

Report of the Delegates to the A. M. A.

Report of the Treasurer.

Report of the Secretary.

New Business.

Selection of the Nominating Committee.

SELECTIONS TO FILL VACANCIES ON THE STATE BOARD OF MEDICAL EXAMINERS

(Report to be made at Final General Session)

Vacancies occur in the First, Fourth and Fifth Districts.

The members now serving the above districts are: Dr. W. W. Verser, Harrisburg; Dr. W. W. York, Ashdown, and Dr. W. A. Montgomery, Atkins. All three have served only one term and are eligible for re-election.

Counties composing these districts are as follows:

First—Clay, Craighead, Greene, Crittenden, Cross, Lee, Mississippi, Poinsett, Phillips, St. Francis and Woodruff.

Fourth—Crawford, Logan, Sebastian, Scott, Polk, Sevier, Pike, Howard, Little River, Miller and Montgomery.

Fifth—Franklin, Johnson, Pope, Yell, Conway, Faulkner, Perry and Pulaski.

SCIENTIFIC SESSION

Tuesday, April 21, 1:30 P. M.

Grim Hotel

"Essentials of Good Surgery"—Chas. S. Holt, Fort Smith.

"The Condition of Peripheral Vessels in Hypertension"—Lantern slides—Ralph A. Kinsella, St. Louis.

"The Treatment of Congestive Heart Failures"—Arthur G. Sullivan, Hot Springs.

"Chronic Appendicitis"—Geo. V. Lewis, Little Rock.

"Prevention of Post-Operative Sequelae"—A. G. Harrison, Searcy.

"Cor Bovinum; With Report of a Case"—R. B. Robins, Camden.

"Surgeon's Problem in Gas Gangrene"—L. V. Parmley, Little Rock.

"Motion Pictures of a Human Heart"—Homer A. Higgins, Little Rock.

GENERAL SESSION

Tuesday, April 21, 7:30 P. M.

Grim Hotel

Calling the Society to Order—E. E. Barlow, President.

Invocation—Rev. F. E. Maddox, Texarkana.

Address of Welcome for Texarkana—Hon. S. C. Nancarrow, Mayor of Texarkana.

Address of Welcome for the Miller County Medical Society—A. G. Lee, Texarkana.

Response to the Address of Welcome on Behalf of the Arkansas Medical Society—W. W. Verser, Harrisburg.

President's Annual Address—E. E. Barlow, Dermott.

Address—Mr. Victor Murdock, Wichita, Kansas.

MEMORIAL SESSION

Baptist Church (One Block from Hotel)
Fourth and Pine Sts.

Joint Session with the Auxiliary.

Wednesday, April 22, 8:30 A. M. to 9:30 A. M.

Committee on Necrology—G. A. Warren, Black Rock, Chairman; J. M. Lemons, Pine Bluff; E. F. Ellis, Fayetteville; E. L. Beck, Texarkana; J. A. Foltz, Fort Smith.

Calling of Meeting to Order—President Barlow.

Song of Consolation (Cole)—Cozia Hynson Case.

Invocation—Rev. M. T. Andrews, Pastor of First Baptist Church.

Quartette:

Hymn—O Paradise, O Paradise.
God Shall Wipe Away All Tears (Fields).

Address—G. A. Warren, Black Rock.

Hymn—Beneath the Cross of Jesus.

Address—Mrs. T. M. Fly, Little Rock.

Benediction.

DECEASED MEMBERS

John Lewis Smiley, Siloam Springs, April 15, 1930.
James Leon Green, Hot Springs, April 21, 1930.
Horace F. Villars, Little Rock, April 24, 1930.
Austin L. Bowers, Keo, June 18, 1930.
Luther Hinton Stout, Brinkley, June 29, 1930.
Martin Johnston Barlow, North Little Rock, July 1, 1930.
William Ridley Lee, Mineral Springs, July 13, 1930.
C. S. Miller, Hot Springs, July 23, 1930.
James Phillip Lunt, Rector, August 14, 1930.
Cowley S. Pettus, Little Rock, August 17, 1930.
Horace Oliver Wilson, Rison, September 4, 1930.
Enoch Taylor Jones, Hampton, October 1, 1930.
Martin C. Burnett, Wooster, November 30, 1930.
John W. Bean, Marvell, December 28, 1930.
John Thomas Hunn, Harrisburg, January 3, 1931.
Charles Eugene Swift, Elkins, January 10, 1931.
Joseph Phineas Runyan, Little Rock, February 2, 1931.
Nettie Klein, Texarkana, February 5, 1931.
Luther Hayes Callen, February 25, 1931.
John Simpson Cannon, West Fork, February 27, 1931.
Frank Lawrence Castleberry, Jonesboro, March 11, 1931.
Harry C. King, Fort Smith, March 11, 1931.
Daniel Edward Drennen, Hot Springs, April 3, 1931.
John H. Kinsworthy, Little Rock, April 4, 1931.
I. A. Ryan, Fort Smith, April 9, 1931.

SCIENTIFIC SESSION—Continued

MORNING SESSION

Wednesday, April 22, 10:00 A. M.

"The Clinical Significance of Dysphonia"—Homer Dupuy, New Orleans.

"Schillings Differential Count"—Lantern slides—M. J. Kilbury, Little Rock.

"Oculo-Glandular Tularemia"—Everett C. Moulton, Fort Smith.

"Cross Eyes"—K. W. Cosgrove, Little Rock.

AFTERNOON SESSION

Wednesday, April 22, 1:30 P. M.

"Obscure Abdominal Pain, Importance of Careful Urinary Tract Investigation"—J. Hoy Sanford, St. Louis.

"Treatment of Acute Epididymitis and Seminal Vesiculitis"—T. N. Black, Hot Springs.

"The Present Status of the Rheumatism Problem"—O. C. Melson, Little Rock.

"Visceral Syphilis"—A. A. Blair, Fort Smith.

"Diagnosis of Inflammation of the Male Urethra"—Paul Z. Browne, Hot Springs.

"Problems in Infant Feeding"—Paul H. Power, Pine Bluff.

"The Irritable Spastic Colon; a Common Condition Frequently Mismanaged"—G. W. Parson, Texarkana.

"Electrocardiography As An Aid in Diagnosis and Prognosis of Cardiac Irregularities"—Roy F. Baskett, Texarkana.

GRIM HOTEL

8:00 P. M.

President's Reception.
Entertainment.
Vaudeville, Music, Dancing, Cards.

MORNING SESSION

Thursday, April 23, 8:30 A. M.

"Clinical Symptoms in the Prognosis of Tuberculosis"—J. D. Riley, Booneville.

"Radiation in Carcinoma of the Breast"—Ira H. Lockwood, Kansas City.

The Etiology, Symptomatology and the Early Diagnosis of Cancer and the proper time for Surgery and Radiation Therapy will be discussed, with an attempt to classify Carcinoma of the Breast in such a manner that the proper treatment may be given the individual regardless of the hopelessness of the situation. A brief paragraph of the paper will discuss the early Roentgen Diagnosis of tumors of the breast. Lantern slides and exhibit of X-ray films.

Motion Pictures—"The Treatment of a Normal Breech Presentation" (Three Reels).

The Case of Pollenosis: Diagnosis and Treatment—A. C. Cazort, Little Rock.

"Oxygen in Gas Gangrene"—S. F. Hoge, Little Rock.

"The Injection Treatment of Varicose Veins"—A. Isom, Dumas.

"Colitis As a Focus of Infection and Its Management"—W. F. Porter, Hot Springs.

"A Plea for the Use of Spinal Anesthesia in Selected Cases"—W. Decker Smith, Texarkana.

FINAL MEETING OF THE HOUSE OF DELEGATES

Grim Hotel

Thursday, April 23, 1:30 P. M.

Calling Meeting to Order—E. E. Barlow, President.

Roll Call.

Report of the Nominating Committee.

Election of Officers:

President-Elect.

First Vice-President.

Second Vice-President.

Third Vice-President.

Secretary.

Treasurer.

Five Councilors.

Delegate to the A. M. A.

Report of Committees.

Further New Business.

Adjournment.

FINAL GENERAL SESSION

(Thursday afternoon, April 23, immediately after adjournment of the House of Delegates)

Calling meeting to order—E. E. Barlow, President.

Unfinished Business.

Report of the Reference Committee.

Presentation of President D. A. Rhinehart.

Presentation of the President-Elect.

New Business.

Selection to Fill Vacancies on the State Board of Medical Examiners.

Selection of Place for Next Meeting.

Adjournment sine die.

Announcements and Program

SEVENTH ANNUAL SESSION

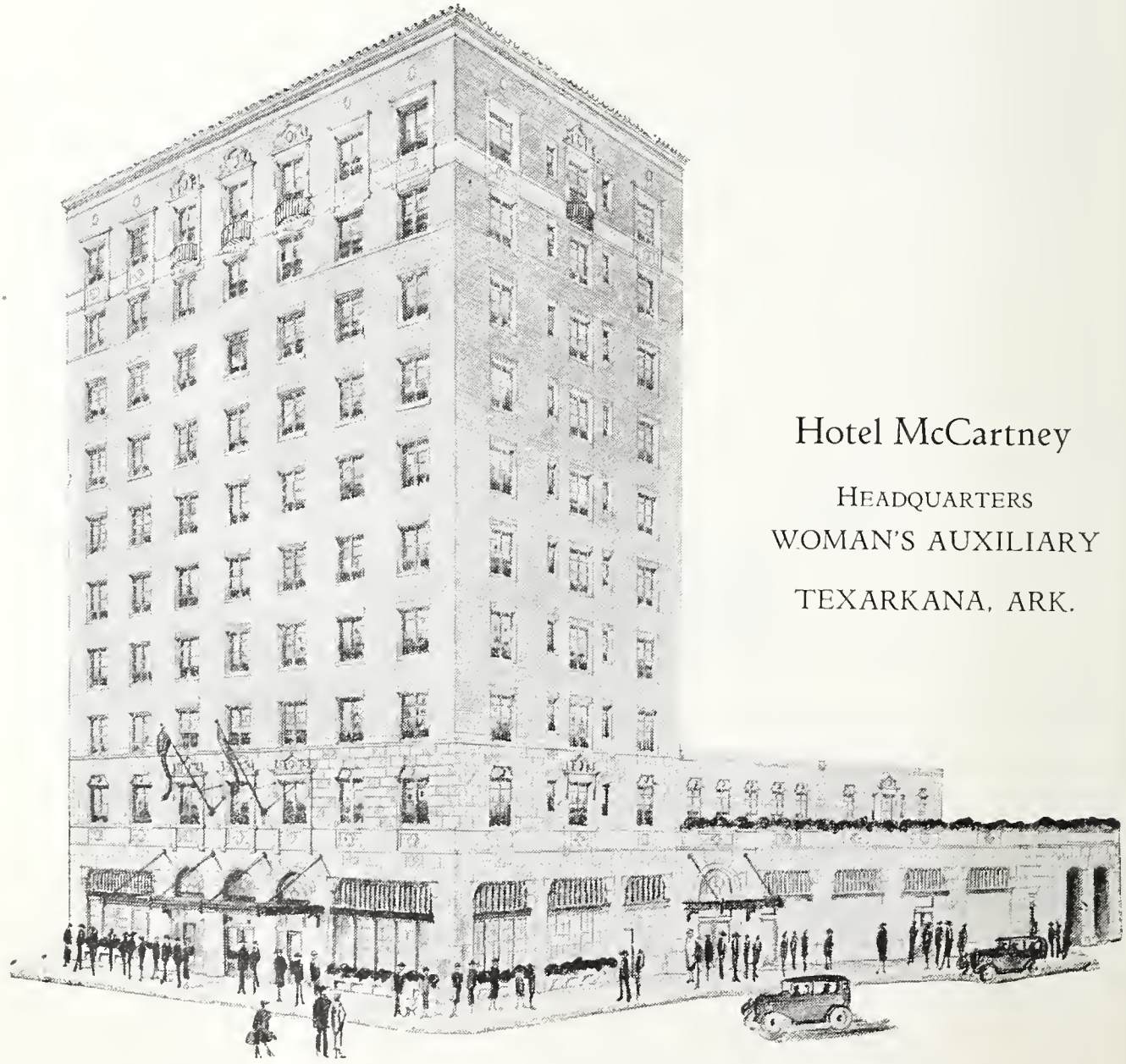
OF THE

WOMAN'S AUXILIARY

of the Arkansas Medical Society

TEXARKANA

APRIL 21, 22, 23, 1931



Hotel McCartney

HEADQUARTERS
WOMAN'S AUXILIARY

TEXARKANA, ARK.

PROGRAM

WOMAN'S AUXILIARY
OF THE
ARKANSAS MEDICAL SOCIETY
SEVENTH ANNUAL MEETING

April 21, 22, 23, 1931

Headquarters: Hotel McCartney, Texarkana

OFFICERS

President—Mrs. Chas. E. Oates, North Little Rock.

President-Elect—Mrs. W. R. Brooksher, Jr., Fort Smith.

Vice-President—Mrs. P. H. Phillips, Ashdown.

Secretary—Mrs. B. A. Rhinehart, Little Rock.

Publicity Secretary—Mrs. Marcus T. Smith, Conway.

Treasurer—Mrs. E. L. Beck, Texarkana.

Parliamentarian—Mrs. W. V. Laws, Hot Springs.

Historian—Mrs. C. W. Garrison, Little Rock.

DIRECTORS.

Mrs. C. T. Drennen, Hot Springs.

Mrs. E. E. Barlow, Dermott.

Mrs. J. C. Cunningham, Little Rock.

Mrs. Grayson Tarkington, Hot Springs.

PAST PRESIDENTS

Mrs. C. W. Garrison, Little Rock.

Mrs. Dewell Gann, Sr., Benton.

Mrs. C. T. Drennen, Hot Springs.

Mrs. Thaddeus G. Porter, Hazen.

Mrs. Charles G. Hinkle, Batesville.

STANDING COMMITTEES

ORGANIZATION

Chairman, Mrs. P. H. Phillips, Ashdown; Mrs. J. C. Cunningham, Little Rock; Mrs. Grayson Tarkington, Hot Springs; Mrs. C. T. Drennen, Hot Springs; Mrs. E. E. Barlow, Dermott.

STUDENT LOAN FUND

Chairman, Mrs. Curtis W. Jones, Benton; Mrs. C. A. Dickens, DeWitt; Mrs. W. E. Gray, Jr., Little Rock; Mrs. A. H. Tribble, Hot Springs; Mrs. A. Isom, Dermott; Mrs. T. F. Kittrell, Texarkana.

HYGEIA

Chairman, Mrs. J. B. Crawford, Little Rock; Mrs. T. J. Bush, El Dorado; Mrs. S. J. Wolfermann, Fort Smith; Mrs. Dewell Gann, Sr., Benton; Mrs. Hugh Brooks, Conway; Mrs. Gaston Hebert, Hot Springs.

CONSTITUTION AND BY-LAWS

Chairman, Mrs. F. A. Gray, Batesville; Mrs. W. V. Laws, Hot Springs; Mrs. A. R. Stover, Little Rock.

PUBLIC RELATIONS

Chairman, Mrs. B. A. Rhinehart, Little Rock; Mrs. J. S. Kolb, Clarksville; Mrs. W. H. Blankenship, Pine Bluff; Mrs. W. P. Cooksey, Magnolia.

EDUCATION AND PUBLIC HEALTH

Chairman, Mrs. R. H. Whitehead, DeWitt; Mrs. C. G. Hinkle, Batesville; Mrs. L. V. Parmley, Little Rock; Mrs. David Levine, El Dorado; Mrs. Loyd Thompson, Hot Springs; Mrs. A. F. Hoge, Fort Smith.

FINANCE

Chairman, Mrs. O. T. Benton, Lonoke; Mrs. W. G. Hodges, Malvern; Mrs. J. S. Westerfield, Conway.

MEMORIAL

Chairman, Mrs. T. M. Fly, Little Rock; Mrs. J. R. Lynn, Hazen; Mrs. Earle Hunt, Clarksville.

ADVISORY COMMITTEE ARKANSAS MEDICAL SOCIETY

Wm. R. Bathurst, D. W. Goldstein and T. F. Kittrell.

LOCAL COMMITTEES FOR MEETING OF THE WOMAN'S AUXILIARY TO THE ARKANSAS MEDICAL SOCIETY IN TEXARKANA

ENTERTAINMENT

Mesdames H. E. Murry, E. M. Watts, L. J. Kosminsky, Preston Hunt, S. A. Collom, Sr., J. T. Robinson and P. H. Phillips.

PUBLICITY

Mesdames R. R. Kirkpatrick, Albert Mann, L. H. Lanier, and L. J. Kosminsky.

INVITATION

Mesdames S. A. Collom, Sr., T. F. Kittrell, Preston Hunt, H. H. Smiley, R. H. T. Mann, F. E. DeLoach and J. R. Dale.

AUDITORIUM

Mesdames L. J. Kosminsky, L. H. Lanier, J. K. Smith, J. N. White, W. E. Womack.

AUTOMOBILE

Mesdames Allen Collom, Jr., C. A. Smith, Jr., T. E. Fuller, W. L. Kitchens, Hugh Longino, Decker Smith.

TELEPHONE

Mesdames W. L. Kitchens, J. N. White, J. F. Williams, Preston Gardner, S. A. Collom, Jr.

DECORATING

Mesdames T. E. Fuller, Preston Hunt, Roy F. Baskett, H. H. Smiley, A. W. Roberts, E. A. Hawley, Geo. W. Parson, L. P. Good and E. M. Watts.

HOTEL AND REGISTRATION

Mesdames E. L. Beck, H. H. Smiley, Decker Smith, Geo. Cale, Jr., Albert Mann, C. A. Smith, Sr., J. F. Williams, W. P. Rochelle, P. H. Phillips, N. B. Daniel, A. Hutchinson, H. McAdoo, A. G. Lee, W. K. Read, B. C. Middleton, Sally Spearman, and R. H. Lacy.

MUSIC

Mesdames Preston Gardner, J. R. Dale, Preston Hunt and Roy F. Baskett.

FINANCE

Mesdames C. E. Kitchens, C. A. Smith, Jr., W. L. Kitchens.

COURTESY

Mesdames Roy F. Baskett, R. R. Kirkpatrick, C. E. Kitchens, J. T. Robison.

Program

TUESDAY, APRIL 21

Hotel McCartney

8:30 A. M. Registration.

9:00 A. M. Past State President's Breakfast.

12:00 M. Executive Board Luncheon.

2:00 P. M. Business Meeting.

Call to Order—Mrs. William Hibbitts, President, Bowie-Miller Counties Auxiliary.

Invocation—Rev. J. S. Sleeper, First Presbyterian Church.

Address of Welcome—Mrs. S. A. Collom, Texarkana.

Introduction of State President, Mrs. Charles E. Oates, Little Rock.

Response to Address of Welcome—Mrs. H. H. Smith, Fort Smith.

Address of President of the Arkansas Medical Society—E. E. Barlow, Dermott.

Introduction of Honor Guests:

Mrs. S. A. Collom, President, Southern Medical Association Auxiliary.

Mrs. O. M. Marchman, President, Texas Auxiliary.

Mrs. A. A. Herold, President, Louisiana Auxiliary.

Reading of Minutes.

Announcement of Committees.

Report of Registration Committee.

Report of Entertainment Committee.

4:00 to 6:00 P. M. Drive over city. Tea at home of Mrs. William Hibbitts, 2524 Wood Street.

7:30 P. M.

Grim Hotel

GENERAL SESSION

Arkansas Medical Society

WEDNESDAY, APRIL 22nd

8:30 A. M. Memorial Service—First Baptist Church, Fourth and Pine Streets. (Joint Session with the Arkansas Medical Society.)

9:30 A. M. General Session of Woman's Auxiliary—Watts Hall, First Baptist Church.

Meeting called to order by the President, Mrs. Chas. E. Oates, Little Rock.

Reading of Minutes.

Reports:

State Officers.

State Committees.

County Auxiliaries.

Special Committees.

Report of Woman's Auxiliary to American Medical Association—Mrs. Wm. R. Brooksher, Jr., Ft. Smith.

Report of Woman's Auxiliary to Southern Medical Association—Mrs. M. J. Kilbury, Little Rock.

Report of Nominating Committee.

Election of Officers.

1.00 P. M. Luncheon and Closing Session at Texarkana Country Club.

3:00 P. M. Executive Board Meeting—Mrs. W. R. Brooksher, Jr., presiding.

GRIM HOTEL

8:00 P. M.

President's Reception.

Vaudeville—Music—Dancing—Cards.

THURSDAY, APRIL 23rd
Hotel McCartney

9:00 A. M. Round Table Discussion of County Auxiliary Problems.

(Presidents, Presidents-Elect and Delegates are expected to be present at this meeting. Visitors welcome).

Personal and News Items

Dr. Arthur Paul Wakefield of Boston addressed a meeting of the Pulaski County Medical Society on Tuberculosis, April 2, 1931.

Dr. A. G. Emerson of Bradford and Dr. W. N. Elkins of Junction City recently visited in Little Rock.

Dr. and Mrs. Paul Mahoney and Dr. Dewell Gann, Jr., Little Rock, are touring Europe, and before their return they will spend a month attending the clinics of Vienna.

Dr. Theo Freedman, Little Rock, State Deputy of the Order of DeMolay, attended a conference of the Grand Council of DeMolay, held in the national capital, March 16 and 17.

Dr. William D. Mims of Memphis read a paper on "Blood Transfusion and The Lindeman Method as Adapted to Infants and Children" before the Pulaski County Medical Society, March 30, 1931.

At the meeting of the Sebastian County Medical Society, March 10, Drs. H. H. Smith and J. A. Foltz were elected delegates to the State meeting and Drs. W. R. Brooksher, Jr., and A. A. Blair were elected as alternates.

If every family used sufficient quantities of milk, vegetables, lean meat, fish, and poultry products, there would be no pellagra. Low-cost dietaries containing adequate amounts of these foods are suggested in a pamphlet, "The Family's Food at Low Cost," obtainable from the Bureau of Home Economics, Washington, D. C.

But when families have few resources and live for the three or four months of late winter and early spring largely on corn meal, fat meat and molasses, it is almost inevitable that pellagra will appear. Such a ration is deficient in so many respects that almost any protective food improves it. Milk in any form and lean meat, fish, or poultry are of the greatest practical importance as pellagra preventives, but tomatoes, cheese, eggs, beans, peas, and some leafy and other vegetables all add their bit of protection.

Dr. John R. Brinkley of Milford, Kansas, of "goat gland" fame, will open a radio broadcasting station at Monterey, Mexico. Brinkley was debarred from practice by the State of Kansas, and his broadcasting license cancelled by the Federal Radio Commission as a result of its investigation of his notorious "goat gland" clinic.—Iowa Medical Journal.

In this issue of the Journal will be found the complete program and arrangements concerning the Texarkana meeting, April 21, 22 and 23. Delegates should be there when the session opens on the morning of April 21. None of us can afford to miss the biggest and best meeting the Arkansas Medical Society has ever held.

Section 5, Chapter 9 of the By-Laws, Arkansas Medical Society, "No physician or surgeon who solicits patients or business for himself or for an association or other organization of which he is a member, or by which he is employed, or in which he is interested, shall be eligible for membership in this Society; and no physician or surgeon who works for, is employed by, or is interested in any association or organization which solicits patients, members or business shall be eligible for membership in this Society. Any member of this Society who shall hereafter violate any of the provisions hereof shall be expelled from the Society."

RESOLUTION FROM CARROLL COUNTY MEDICAL SOCIETY

Whereas, the Supreme Court of the State of Arkansas in the recently decided case of ALLEN v. INGALLS, *et al.*, has handed down a sweeping decision not only sustaining the power of school boards to require vaccination of pupils attending schools as a pre-requisite to such attendance, but also providing that such requirement may specify that such vaccination shall be the customary and recognized operation of scarifying the skin and administering thereto bovine virus; and

Whereas, said action has been defended and the decision thus obtained through a financing of the litigation by the School Board of the City of Eureka Springs, and constitutes a far reaching step in the public recognition of the said form of vaccination as not only the legal form thereof, but will go far toward making

possible a greater protection to the public health; and,

Whereas, preparations are under way to appealing said case to the Supreme Court of the United States, which court has in no reported case sustained vaccination further than as an approved specific against smallpox, without specifically recognizing any particular form of vaccination; and

Whereas, the purpose of the appeal is to obtain from said Supreme Court a disapproval of the State court finding specifically recognizing the conventional form or method of vaccination as a legal method and permitting it to be specifically prescribed and required; and

Whereas, the said School Board is unable financially to give further support in the matter;

Therefore, Be It Resolved by the County Medical Society of Carroll County, Arkansas, that it is the sense of this Association that the case so appealed should be represented by those who adhere to the said conventional form of vaccination, and that financial support to the proper representation in said case, of the contentions of the said School Board therein, should be given by our State Medical Society, and it is requested so to do.

That a copy hereof be forwarded to Secretary of the State Medical Association.

Unanimously adopted, January 13, 1931.

J. Rainey Parker, President.

R. H. Huntington, Secretary.

Carroll County Medical Association.

TUBERCULOSIS AMONG HIGH SCHOOL STUDENTS

By Walter L. Rathbun

National Tuberculosis Association

NOTE—ADOLESCENCE is a period of strain. Youngsters who have, during the earlier years of childhood, been massively infected with tubercle bacilli are likely during the teen age period to develop the adult type of tuberculosis. It is during high school years that the destiny of many of these children is decided. This is reflected in the steep rise in the death rate curve during the late teens and early twenties. Walter L. Rathbun has, since 1923, made a systematic search for early tuberculosis, regardless of symptoms, by means of the tuberculin test and the x-ray. He has recently completed the task of examining practically every high school pupil in Chautauqua County, New York; namely, 7,711 children. His experiences are recorded in a special publication, from which these abstracts are derived.

Examinations of school children for early tuberculosis began in Chautauqua County, New York, in 1923 by sending to local clinic centers (a) pupils physically below par, (b) those who had symptoms referable to tuberculosis and (c) those who have been exposed to the disease. The results of the first year's effort were enlightening, but since facilities were limited, it was decided the next year to examine only the high school groups because these children leave school first. Each high school student was given a chest examination without reference to family history, height-weight ratio, or symptoms. The results justified the procedure as many cases of tuberculosis were found among those in whom it was least suspected and who were apparently perfectly healthy.

Of the students so examined, three groups were then x-rayed: (a) those with suggestive signs of pulmonary tuberculosis; (b) those in actual contact with a case of tuberculosis; (c) those with a history of previous or present symptoms referable to tuberculosis. All such children were transported to Newton Memorial Hospital, where they were x-rayed This procedure continued during 1924 and 1925, when the plan was broadened by carrying the diagnostic work directly into the schools.

Examinations Made in Schools

The Chautauqua County Tuberculosis Association furnished funds to purchase a portable apparatus and x-ray films which made it possible to do the work in the school buildings. Incidentally, while it is true that the portable x-ray machine has its shortcomings, it is capable when properly handled of revealing lesions of the childhood and the adult type. The few cases in which more detail is needed may be x-rayed with a high-powered machine. The utility of the portable apparatus is a distinct advantage, and having the examinations made in the school arouses interest among school people.

Protecting the Students' Health

The tendency in modern schools is to push the students to the limit of their capacities. Healthy children can stand the pace, but not those who are below par physically. Therefore, those with physical disabilities, real or

potential, must be searched for and protected from overwork. Similarly, sports and competitive athletics must be curtailed for the physically handicapped. Rough handling and excitement are heavy drains on the body reserve and frequently precipitate a breakdown. School authorities in Chautauqua County cooperated admirably in protecting those who needed protection.

The public schools are logical centers for the dissemination of medical knowledge about tuberculosis, just as they serve as convenient units for discovering cases. Every student should be examined before graduating and certainly before working papers are granted.

Of course, no child with positive sputum should be allowed to attend school lest he infect his fellows.

"Every available resource that can be spared should be devoted to the public school field, for in the control of tuberculosis our hope of success in the years to come rests largely upon the care of the youths of today."

Amendment to the By-Laws of the Benton County Medical Society:

"At the beginning of each year the newly elected president shall appoint a standing committee on 'Public Health Education'.

"This committee shall be composed of three members of the Benton County Medical Society to which, for the purpose of cooperation shall be added the incumbent President and Secretary of the Society as ex-officio members.

At least one member of the committee shall hold over however from the preceding year so that not more than two new members aside from the President and Secretary shall be appointed at any one year, except when vacancies occur. The committee shall hold office until new members have been appointed as provided.

"The functions of this committee shall be:

"First—To endeavor to develop an intelligent public view point toward the medical profession.

"Second—To cooperate with the various agencies whose function is the promotion of Public Health and whose governing bodies are composed in whole or in part of Laymen, so that from a medical standpoint these agencies shall be intelligently administered.

"Third—To use such measures as may be helpful in the elimination of fraudulent medical advertisements from the public press and to combat quackery in every way possible.

"Fourth—To conduct annually within its jurisdiction at least two public health meetings to which the laity shall be invited.

"Fifth—To encourage and promote public health educational matters through the channels of the public press, lecture platform, pictures or any other legitimate, ethical method.

NEW RULES AND REGULATIONS OF THE ARKANSAS BASIC SCIENCE BOARD

Provisions have been made by the Basic Science Board where by reciprocity agreements will be accepted by those States that do not have a Basic Science Board.

In consideration of the above we agree that we will exempt from the Basic Science Examinations such candidates who can present the following certified credentials:

1. That he has passed an examination in Bacteriology, Chemistry, Anatomy, Physiology, and Pathology before a State Board of Basic Science or State Board of Examiners in the healing arts, authorized by law to hold such examinations.

2. That the above State grants like exemption from examination to persons now legally entitled to practice the healing art as defined by the Arkansas Basic Science Act.

3. This board will not license through reciprocity any applicant who has previously failed at one of its examinations.

4. Applicants must fill out reciprocity application blank complete and when this is accepted this board will certify direct to such a State Board as the applicant is applying to for license.

5. It is not the intention that the certification of this board should in any way relieve the regular State Board from investigating the applicant for license. The usual precaution and procedure should be followed.

Basic Science Certificates will be issued only by examination, and not by any reciprocity agreements.

Auxiliary Notes

PANORAMIC VIEW OF THE WOMAN'S AUXILIARY TO THE A. M. A.

SOUTHERN DISTRICT

Mrs. C. W. Garrison, Little Rock

The third or Southern District of the Woman's Auxiliary to the A. M. A. may not have moved so rapidly as regards the number of Auxiliaries organized as the other sections, but the quality of those existing have proven them to be of the greatest value in promoting the aims of the national body.

Alabama reported three counties organized last year, and is particularly interested in a health program giving especial attention to children with a tuberculous condition. The group visited in Birmingham were alive and interested, and had the cooperation of their Medical Society.

Arkansas reported thirteen counties organized, all giving attention to a health program and trying to raise an adequate loan fund for medical students only. Some of the counties contributed obstetrical kits for use in the rural districts. Many of the Auxiliary members in Arkansas are devoting much time and energy to the Parent-Teacher work and are aiding in the various civic and welfare organizations. All will be gratified when the State is organized 100 per cent.

Florida, large areas of which are sparsely settled, has ten auxiliaries. Some of these are composed of a combination of two or more counties. Proof of the quality of these groups was seen when a large medical organization and its Auxiliary were entertained in Miami in 1929. Mrs. J. Ralston Wells, the little woman who now heads the State Auxiliary furnishes further proof of their aliveness and interest. Florida with her marvelous fruits, flowers, vegetables and her wonderful sunshine has just as wonderful and marvelous women in her Medical Auxiliary.

Georgia, which has given to A. M. A. Auxiliary one of its most efficient presidents, Mrs. Allen H. Bunce, has more counties than any other State of its size and has twenty-one of these organized for Auxiliary. They have the full approval and cooperation of the State Medical Association, and having attended their State convention in 1929, the writer will vouch for the fact that no national meeting is more replete with interest and enthusiasm than were found in Georgia, nor have we found anywhere a greater desire to foster the aims and purposes of the national body. No group of women can possibly have greater courtesy, interest and encouragement shown them and their work than is given to the Georgia Auxiliary by the medical men.

Louisiana reports only two parishes organized. Taking into consideration the fact that one of these two auxiliaries has a greater enrollment than have some whole States makes us feel that Louisiana will not be far behind in the number of parishes when her final report of accounting comes in. She is not lacking in interest in any direction because the president of the State Auxiliary, Mrs. Harrold, is of the type who says "We will."

Mississippi reported four auxiliaries last year, and again we are able to speak with assurance of our expectations from this State. The president of the State Auxiliary attended the meeting in Detroit and returned to her State carrying with her additional enthusiasm and determination to gather into the fold more county organizations. This dream will come true. Mrs. Polk was the first to respond to our first circular letter. She has the approval and encouragement of the medical men of her State to go forward.

We may expect to hear of more interest, as well as more auxiliaries in North Carolina. Mrs. W. B. Murphy is the President of this great State, and though we have before us no report for last year, we do know of their interest in the past and believe we may hear the number five at least doubled in their next report.

South Carolina shows thirteen counties organized, and Mrs. Mauldin was prompt to reply with assurances that better things are ahead for next year.

Mrs. L. M. Sackett now leads the one Auxiliary reported from Oklahoma, and we feel certain that others will be added before June.

On invitation from its President we had the pleasure of meeting with the Davidson County Auxiliary in Tennessee early in October, and found a splendid group of women earnestly desiring to serve in the most useful way. We found as a member of this Auxiliary the State President, Mrs. Milton S. Lewis. While only four auxiliaries are reported from Tennessee, they are the counties in which the

largest cities are located. The distances are great between, but with the known interest and enthusiasm of the two counties visited, Davidson and Shelby, we are assured that Tennessee will bring to the next National Meeting a report filled with accomplishments which tend to fulfill the aims and purposes of the Auxiliary.

While we were not fortunate enough to meet with the Texas Auxiliary, we did have a little visit with the energetic and charming president, Mrs. O. M. Marchman. Texas, the mother State of the Medical Auxiliary as it is now recognized, has thirty-five County Auxiliaries, and with a live, interested organization chairman such as Mrs. J. T. Moore is proving herself to be, others will be added before the next State meeting in May. Texas Auxiliaries have earnestly promoted a health program, always working shoulder to shoulder with the fine progressive men of the Medical Association who, in turn, endorse the Auxiliary movement, and are unstinted in encouragement to further development of the organization.

At this time the minds of the Third District are directed towards the Keystone State and the City of Brotherly Love, and many are hoping to be wending their way to Philadelphia in early June that they may partake of the feast of inspiration and absorb the spirit of Auxiliary. Pennsylvania and her neighboring States have grown so marvelously that all are now anxious to sit at their feet and learn. This the third district is anxious to contribute its quota of honor paid to the medical men in whose interest we serve, and so it is with high anticipation that all plans are being made to be present at the annual meeting of the A. M. A. June 8-12, 1931.

Communications

HEALTH EDUCATIONAL CLINIC No. 1

McCrory, Ark., March 21, 1931.

Secretary and Council
Arkansas Medical Society
Little Rock, Arkansas

Gentlemen:

As you see from the notation on my stationery the Health Educational workers, of which I am a member, are studying the slavery of the Fifth Estate, and the effects the different organizations are having upon the people to make it possible to hold the present slavery of the Fifth Estate in force.

To this date your records show I have been a supporter of the Arkansas Medical Society, but now I realize and have ample proof, that this organization is playing a lions share in helping to hold Arkansas citizens in slavery of the Fifth Estate. For that reason I dislike to give my support to the Society.

Previous to this date I have asked for consultation with the Arkansas Medical Council on this subject, but have been refused, and have heard neither yea nor nay except from one man of the Council and it was judgment rendered without giving the witnesses a chance to come on the stand.

Now I am convinced that the organization is working in harmony with the forces that are helping to hold our citizens in slavery of the Fifth Estate. I wish it known that I am an advocate for the government, for the people, by the people, taxation only with representation, and opposed to slavery of the Fifth Estate.

Yours truly,

R. L. FRASER, M. D.

Obituary

BURNETT, MARTIN C.—Dr. M. C. Burnett of Wooster, aged 57, died November 30, 1930.

CALLEN, LUTHER HAYES—Dr. Luther H. Callen of Fayetteville, aged 52, died February 25, 1931. He was born in Berryville and had practiced medicine since 1904. At the time of his death, he was county health officer.

Surviving are his mother, Mrs. Edna Callen; two brothers, Dr. Clyde Callen, Fayetteville and Cuthbert Callen, Twin Falls, Idaho; two sisters, Mrs. Ruth Poyner and Mrs. Albert Stevens, both of Stilwell, Okla.

CANNON, JOHN SIMPSON—Dr. J. S. Cannon of West Fork, aged 75, died February 27, 1931. He was one of the oldest practicing physicians in Washington County.

CASTLEBERRY, FRANK LAWRENCE—Dr. F. L. Castleberry of Jonesboro, aged 56, died March 11. He practiced medicine in Paragould for several years, moving to Jonesboro about a year ago. He was a mem-

ber of the Green County Medical Society. Dr. Castleberry was a captain in the army during the World War and was one of Arkansas most active American Legion workers.

He is survived by his wife and one daughter, Miss Frances; three brothers, Preston of Pine Bluff and C. E. and Tobe of Little Rock.

KING, HARRY C.—Dr. H. C. King, Fort Smith, aged 60, died March 11, after a brief illness.

He is survived by his wife; three daughters, Mrs. B. C. Ames, Fort Smith, Mrs. Frank Cosgrove, Kansas City, Mrs. James McDonough, Jackson, Miss., and a son, Harry King, Denver, Colorado.

SWIFT, CHARLES EUGENE—Dr. C. E. Swift of Elkins, aged 57, died January 10, 1931. Dr. Swift was born at Butler, Missouri, but had lived in Arkansas since early manhood. He had practiced medicine in Elkins for twenty years.

Surviving are his wife and mother, and eight children. The children are Sidney, Jack and Lloyd all of Oklahoma; Carl, Joe and Janelle of Elkins; Mrs. Muriel Sharp of Pea Ridge, and Mrs. Edna Putman of Rogers.

DRENNEN, DANIEL EDWARD—Dr. D. Edward Drennen of Hot Springs, aged 59, died February 3, 1931. He was a native of Alabama, but had resided in Hot Springs for the past thirteen years. He was a brother of Dr. C. Travis Drennen of Hot Springs.

KINSWORTHY, JOHN H.—Dr. J. H. Kinsworthy, Little Rock, aged 64, died April 4, 1931. He had practiced medicine in Little Rock for thirty years.

Surviving are his wife, two daughters, Misses Iris and Unis Kinsworthy, all of Little Rock; a son, Senn Kinsworthy, Detroit, Mich.; a sister, Miss Pearl Kinsworthy, Greensboro, N. C., and three brothers, E. B. of Little Rock, W. E. of Ashdown, and P. S. Kinsworthy of Wilton.

County Societies

CRAWFORD COUNTY

(Reported by Q. R. Galloway, Sec.)

The members of the Crawford County Medical Society had their regular annual banquet, March 26, 1931, at 8:00 p. m., at the Blue Dragon Tea Room, in Van Buren. It was one of the most profitable as well as one of the most enjoyable meetings of the year.

Dr. Pat Murphey, neurologist, Little Rock, gave an interesting and instructive clinical lecture on diagnosis by exclusion of a case of Chorea in a young man sixteen years old. He also gave his treatment.

After Dr. Murphey's lecture, a social hour was spent in which the following doctors spoke: W. R. Reeves of Alma, President of the society and Toastmaster; H. Moulton, E. C. Moulton, D. W. Goldstein, A. F. Hoge, J. A. Foltz, M. E. Foster, J. E. Little, W. G. Eberle, F. H. Krock, C. B. Billingsley, H. H. Smith, J. W. R. Norton, S. J. Wolfermann, and W. R. Brooksher of Fort Smith; M. S. Dibrell of Van Buren.

The following also were present: H. W. Griffin, W. F. Rose, C. S. Means, H. C. Dorsey, M. C. Johnson and Ira F. Jones of Fort Smith; O. J. Kirksey, and J. A. Wigley of Mulberry, and J. B. Trice and Q. R. Galloway of Van Buren.

LAWRENCE COUNTY

(Reported by H. R. McCarroll, Sec.)

The Lawrence County Medical Society met in regular session at Walnut Ridge, March 10, in the office of Dr. H. R. McCarroll. The meeting was called to order by the President, Dr. T. C. Guthrie, and the minutes of the last meeting were read and approved.

Present: W. J. Robinson, G. A. Warren, A. G. Henderson, W. W. Hatcher, T. C. Neece, H. R. McCarroll, Wm. Johnson, J. C. Land, and T. C. Guthrie.

The following visitors were present: Drs. L. Carl Sanders, Memphis, Tenn.; W. M. Majors, Paragould; W. E. Hughes, Pocahontas; H. A. Stroud, and W. T. Jackson, Jonesboro; U. S. Kendall, Strawberry; J. E. Hardaway, Lynn and J. H. McCurry, Cash. Drs. O. W. Swicord, W. T. Smith and H. N. Chambers represented their profession at the meeting.

Dr. T. C. Guthrie of Smithville presented a paper on Tuberculosis, and Dr. L. Carl Sanders of Memphis one on Syphilis. Both papers were extensively discussed.

Officers elected for 1931 were: President, J. C. Land, Walnut Ridge; Vice-President, W. W. Hatcher, Imboden; Secretary, H. R. McCarroll, Walnut Ridge; Delegate to State meeting, T. C. Neece, Walnut Ridge and J. C. Land, Alternate.

Refreshments were served at the conclusion of the meeting by Mrs. Pearl J. McCarroll assisted by her two daughters, Mrs. Ura Chambers and Miss Bernice McCarroll.

CRAIGHEAD-POINSETT COUNTY

(Reported by Thad Cothern, Sec.)

A regular meeting of the Craighead-Poinsett Medical Society was held April 2 in the banquet hall over Link's Cafe. A very interesting program was in store, which would have been worth while though a greater treat was had for those present by a visit of one of the South's greatest medical teachers, Dr. McElroy of Memphis. The doctor had been called to make a professional visit to our city and fortunately, it was so timed that he was enabled to be the guest of the Medical Society while here.

The prepared program was dispensed with and the hour was turned over to Dr. McElroy, who gave us a leeture on the "Diseases of the Kidney." It took him some little time to cover the conditions embraced in his lecture and every moment of it was enjoyed by those in attendance, for we knew we were being given something worth while.

At the close of his lecture many questions were asked him concerning various phases of kidney ailments. Indeed fortunate were those in attendance at this meeting for it was a rare treat.

Drs. Willett of Jonesboro and McDaniel of Tyronza were elected delegates to the State Meeting and Drs. Jernigan and McAdams of Jonesboro were elected alternate delegates.

Among those present were: Baird of Marked Tree; Elders, Harrisburg; Ellis, Monette; Hull, Mammoth Spring; McCurry, Cash; McDaniel, Tyronza and McElroy of Memphis; Cothern, Haltom, Henderson, Jernigan, McAdams, Pratt, Sloan and Willett of Jonesboro.

Book Reviews

How It Happened.—By Adalbert G. Bettman, M. D., F. A. C. S. Published by F. A. Davis Company, Philadelphia. 1931. Price, $1.00 net.

This book presents health hints in a very unusual manner and is of equal interest to the profession and laity. It will serve well as a gift to patients.

Drifting Sands of Party Politics.—By Oscar W. Underwood, formerly U. S. Senator from Alabama. With a Foreword by Claude G. Bowers. Published by The Century Company, 353 Fourth Avenue, New York. Price, $3.50.

In the course of this review, the late Senator Underwood shows how, in his opinion, Congress, under pressure of highly organized minorities, has gradually drifted away from the fundamental principles of free government as laid down in the Constitution of the United States. He analyzes the legislation enacted by Congress from the Spanish-American War through the period of the World War.

Clinical Laboratory Methods—By Russell Landram Haden, M. A., M. M., Professor of Experimental Medicine, University of Kansas, School of Medicine, Kansas City, Kansas. With 69 illustrations and 4 color plates. Third Edition. Published by The C. V. Mosby Company, St. Louis. Price, $5.00.

This volume represents the outgrowth of notebooks used in the development and standardization of the laboratory of a general hospital. This edition has been revised, a few entirely new methods have been added. It contains XIV chapters with many illustrations, four color plates.

Tularemia, History, Pathology, Diagnosis and Treatment.—By Walter M. Simpson, M. D., F. A. C. P., Director of the Diagnostic Laboratories, Miami Valley Hospital, Dayton, Ohio. Foreword by Edward Francis, Surgeon, United States Public Health Service. With 53 Text Illustrations and 2 Colored Plates. Published by Paul B. Hoeber, Inc., New York. Price $5.00.

In Dr. Edward Francis' foreword, in this book he says, "Simpson's pursuit of his subject is a model. Within the pages of his book he states the story of tularemia in a clear, complete and authorative manner."

The author makes reference to work of two Little Rock physicians on the subject, namely: Fulmer and Kilbury.

Doctors and Specialists.—A Medical Revue with a Prologue and a Good Many Scenes. By Morris Fishbein, M. D., Editor of the Journal of the American Medical Association and of Hygeia, the Health Magazine. With Illustrations by Dan Layman. Published by The Bobbs-Merrill Company, Indianapolis, Indiana. Price $1.00.

This book is all the subtitle implies, and is dedicated to "Every Doctor with a sense of Humor—Something a Doctor must have to Live at all." We are confident that our readers will enjoy every page. The 117 pages refers to "The Old-time Practitioner," The Modern Medico," "The Surgeon," "The Obstetrician and Gynecologist," "The Neurologist and Psychiatrist," "The Pediatrician," "The Otolaryngorhinologist," "The Ophthalmologist," "The Dermatologist," "The Urologist," "The Roentgenologist," "The Laboratory Enthusiast," "The Hospital Superintendent," "The Dietitian," "The Nurse," "The Christian Science Practitioner," "The Chiropractor," "A Doctor's Litany."

In part, the author says: "The pediatrician is after all the answer to a mother's prayer. When the whole family is distracted because the infant's temperature has reached one hundred and three degrees and it is screaming blood murder, when all the usual remedies have been tried including walking up and down, singing, a bath in hot water, a drink, a breast feeding, and a changed napkin the pediatrician is summoned to take charge of the case. He enters the room majestically, thumps the chest and back, feels the abdomen, listens to the heart and lungs, looks down the throat and into the nose and ears, examines the last two specimens, orders an enema, changes the formula and the next day the infant is smiling and well. It's magic!"

Heredity in Man—By R. Ruggles Gates, Ph. D., LL. D., F. L. S., F. R. A. I., Professor of Botany in the University of London (King's College); Sometime Associate Professor of Zoology, University of California; Author of "The Mutation Factor in Evolution," "Heredity and Eugenics," etc. Illustrated. Published by The Macmillan Company, New York.

Readers of this book will probably be amazed to see the large amount of information given regarding the inheritance of a multitude of traits, both physical and mental, in mankind. The table of contents is as follows: The General Aspects of Heredity in Man; Inheritance of Stature; Inheritance of Eye Colour and Hair Colour; Hereditary Abnormalities of The Eye; Albinism; Various Skin Characters and Skin Diseases; Anatomical Abnormalities of the Hands, Feet and Limbs; The Blood Groups; Diseases of the Blood System; Metabolic Defects and Derangements; Allergic Diseases; Ears, Teeth, and Tails; Various Abnormalities and Diseases; Inheritance of Mental Differences; Racial Crossing, and a list of general works bearing on human heredity.

Materia Medica and Therapeutics, Including Pharmacy and Pharmacology—By Reynold Webb Wilcox, M. A., M. D., LL. D., D. C. L., Lieutenant Colonel, Auxiliary Reserve, United States Army; Member of the Association of Military Surgeons and of the American Medical Authors' Association. Twelfth Edition, Revised in Accordance with The United States Pharmacopoeia X and the National Formulary V, with an Index of Symptoms and Diseases. Published by P. Blackiston's Son & Co., Inc., 1012 Walnut Street, Philadelphia, Pa.

This volume offers the medical profession a complete presentation of Materia Medical and Therapeutics in keeping with the new U. S. Pharmacopeia X.

The table of contents is divided into two parts. Part I, Materia Medica and Pharmacy. Part II, Pharmacology and Therapeutics.

International Clinics—A quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles—By Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia. Volume III. Thirty-Ninth Series, 1929.

A very interesting chapter in this volume is by B. Bickel, M. D., Washington, D. C., on "Medical Questionnaires." Twenty important questions with their answers are given. Included in the list are: "What Characterizes a Functional Cardiac Murmur?" "What is Being Suggested for the Treatment of Infantile Paralysis?" "What is Being Done To Avoid Encephalitis Following Vaccination?" "Has Whooping Cough Been Overcome?"

Varicose Veins.—With Special Reference to the Injection Treatment. By H. O. McPheeters, M. D., F. A. C. S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital. Illustrated with Half-Tone and Line Engravings. Second Revised and Enlarged Edition. Published by F. A. Davis Company, Philadelphia. Price $3.50 net.

In this new edition, the author emphasizes the importance of the treatment of varicose veins and how miserable may be the patients so afflicted. Chapters are written on the treatment in general, solutions used, technic, etc.

Symptoms of Visceral Disease. A Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine.—By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. Fourth Edition. With eighty-seven text illustrations and ten color plates. Published by The C. V. Mosby Company, St. Louis. Price, $7.50.

The author of this book interprets so far as possible in terms of visceral neurology, symptoms which are found in the everyday clinical observation of visceral disease.

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Original Article

BLOOD TRANSFUSION AND THE LINDEMAN METHOD AS ADAPTED TO INFANTS AND CHILDREN, WITH A BRIEF SUMMARY OF SIXTY-ONE CASES*

WILLIAM D. MIMS, A. B., M. D.,
Memphis, Tenn.

The first authenticated blood transfusion was performed by Jean Baptiste Denys, physician to Louis XIV of France in 1667 using lamb's blood in an attempt to save the life of a boy who had received too many venesections. It is stated that the boy recovered. A lay author reports the life of Pope Innocent VIII in 1492 to have been saved by the infusion of blood obtained by the exsanguination of three Jewish boys (1). The verity of these accounts is to be questioned, however, because they were of an era when, in spite of Harveys doctrine proposed in 1616 that the blood is a circulating medium, the blood was still considered a dormant tissue. The giving of blood orally however, had long been considered a valuable therapeutic measure and it is therefore more probable that it was given in these cases not by vein but as a draught.

Since at that time nothing was known of the biologic and chemical nature of the blood, any measure of the nature of transfusion was usually attended with disastrous results and as a consequence ventures of this sort gained bad repute. Revival of the procedure was attempted at various times during the ensuing two centuries, but scientific countenance was not given the operation until in the first decade of the twentieth century when the work of Landsteiner, Shattock, and Guthrie with agglutinins and agglutinogens and that of Jansky and Moss in grouping (2) showed that the procedure could be carried out with safety. The discoveries of these workers explained all the disastrous symptoms of chills, fever, hemaglobinuria, shock and death attendant upon the earlier efforts which had put transfusion into disrepute, and so paved the way for the confident use of this measure which holds today such a high place in therapeutics.

I am omitting the discussion of the subject-matter and technique of blood grouping, but there are several fallacies in this connection which have by many been erroneously deduced and which I should like to expose. One of these is that of the so-called "universal donor" and "universal recipient." These in reality do not exist. The so-called universal donor's (Group I, Jansky) cells, it is true, contain no agglutinogens which might cause his cells to be agglutinated, but his serum does contain both agglutinins which, when the blood is mixed with that of another group, will cause agglutination of the donor's cells in the recipient's blood stream, which would cause as great a reaction. In the case of the "universal recipient," so-called (Group IV, Jansky), the converse holds true (Agglutinogens but no agglutinins). Universality, therefore, does not scientifically exist. In instances in which the universal donor or recipient has been used without mishap serious reaction was prevented probably because of the relatively small amount of blood given in proportion to the amount in the recipient's blood stream and because of the relative slowness of injection.

Far removed from this inexact classifying of donors and recipients is the praiseworthy practice of cross-matching even of donor and recipient in the same group. This should always be done and many instances have been found in which this cross-matching revealed an incompatability in the same group.

*Read before the Pulaski County Medical Society, Little Rock, March 30, 1931.

Another fallacy with regard to donor and recipient is that a mother may be used without matching as a donor for her new-born babe. This belief has prevailed on the theory that the new-born infant has no blood group. Many fatalities as a result of this erroneous concept are on record. As a rule the agglutinins of the child's serum are not present for some weeks, but the agglutinogens are present in his cells and therefore reaction can occur. The group of the infant, moreover, may change several times in the first few months of life. It is usually definitely established by the sixth month. Determination of the group follows the Mendelian law of heredity and therefore need not necessarily conform to that of any immediate relative.

Still another error of which we have lately become cognizant is in the assumption that a blood group never changes. It may be changed by transfusion. It is held by some that this is not a true finding but is an error at one time or the other in laboratory technique. I have seen this phenomenon only a few times, but even one instance is sufficient to convince me that rematching after the first transfusion is warranted. One instance strikes me very forcibly. It is the case of Purpura Hemorrhagica herein reported in which a severe reaction occurred in the recipient who had during the previous few years been transfused several times from this same donor. Moreover, following this reaction and for the next several months the patient's blood was found to conform to none of the four recognized groups.

When the work of Landsteiner, Shattock, Jansky, et al. made blood transfusion a safe and scientific procedure there were subsequently born many and varied methods for its accomplishment. It is unnecessary to mention these. Each one has its adherents, even the anastamotic method of Murphy and Crile (3) and the Kimpton-Brown tube method. At present the methods have practically narrowed down to three, namely: (a) Modified blood by the vein (Lewisohn; (2) Modified blood by the peritoneal route; (c) Unmodified blood by vein (using any of the popular apparatuses—Lindeman, Unger, Scannell).

In my personal opinion the unmodified method is a considerable advancement over the citrated. Moreover, there are more frequent and greater reactions from modified blood than from unmodified. This is in part due to the sodium citrate used and in part due to cooling; and while the cells are preserved—though more fragile (4)—in citrated blood, the immune bodies of the serum are destroyed. Except in anemia this is frequently the most wanted element. The only argument for citrated blood is the greater ease of manipulation and the lack of necessity for haste. As for the intraperitoneal method, I am unalterably opposed to it, not only because of poor results which it has given in my hands but also because it is an unnatural and roundabout method of approach to the circulatory system, because autopsy several days after the transfusion has shown considerable blood left coagulated in the peritoneal cavity, and lastly, because it is unnecessary and inexpedient even in very small infants to use this route!

This assertion brings me logically to the defense of the method of my choice, explaining its operation and showing its adaptability to small infants as well as older children. This is the Lindeman syringe-cannula method which was perfected by Lindeman in the wards of Bellevue Hospital, being a refinement of the earlier method of von Ziemssen (5). This apparatus and technique commend themselves chiefly for their simplicity, and instead of becoming obsolete, as one writer has stated, this method bids fair to enjoy even greater popularity in the future, when the medical profession has tired of its search for instruments more infallible than the human hand.

The Lindeman outfit consists simply of several record syringes and two needles. The special needles, with which all are doubtless familiar, are in fact an assembly of two cannulas and a needle. Each cannula is ground conically at its point, one longer and smaller so as to slip within the other. Through the inner cannula slips a still smaller needle. The tip of the needle protrudes a small fraction below the tip of the smaller cannula which in turn protrudes a similar fraction below the tip of the larger cannula so that the result is a tapering, graduated, wedge-type needle which may be inserted into the vein in a three phase procedure similar to that used in inserting any trocar and cannula. The needle and inner cannula can then be removed, as the trocar would be in the parallel instance cited, thereby leaving in the vein a cannula large enough to permit the filling of a twenty cc. syringe of blood from the donor and its being emptied through a similar "set-up" in

the recipient before the blood has had time to coagulate or become even more than slightly cooled. This constitutes the entire procedure, and repetition of the loading and unloading of the syringes until the desired amount of blood has been given makes up the remainder of the operation. A nurse washes the syringes in successive rinsings of normal saline as they are used. Tourniquets are, of course, applied to the arms to expand the veins for insertion of the needles, that on the donor remaining to augment the flow of blood. To insert the special needles it is necessary with the aid of a drop of novocain to make a small opening the size of the needle through the skin. Otherwise the force necessary to penetrate the skin would make it almost impossible to insert the needle.

The operation of the Lindeman method is best effected with three people—one to draw the blood, one to inject, and a nurse to wash syringes. Two persons can with slight delays perform the operation and I have frequently in the case of infants and small children accomplished the operation without any assistance. There is no apparatus to stick or clog save the needles, and these can be "reamed out" if they become plugged, and therefore the operation can be stopped and resumed at will. When it is temporarily halted the inner parts of the needle act as obturaltors and prevent its being clogged. This advantage of the Lindeman method—that of being able to halt or resume the operation at will—is the chief advantage, and for this reason: It has long been my custom at the beginning of a transfusion to inject one syringe of blood (20 cc.) into the recipient's vein, loosen the tourniquet, insert the inner parts of each needle—in short, stop the operation—and sit down and await results for a period of four of five minutes. If there has been an error in the blood typing or matching this amount of blood will be sufficient to produce considerable reaction but is not apt to produce serious symptoms. This policy is not intended to discredit the laboratory but is merely another safeguard thrown around the patient. At the end of the time allotted the tourniquet is reapplied to the donor's arm, the interior of each cannula is removed and the operation is now pushed confidently to a hasty conclusion. It requires not more than ten or twelve minutes for the transfer of as much as 500 ccs. of blood.

No particular skill is necessary in the application of the Lindeman method. Considerable practice, however, is fundamental in learning to insert the needles skilfully, and every minor detail of the whole operation should receive respect.

At first sight it would seem impossible to insert the Lindeman needle into any peripheral vein of a child under four or five years. This is not the case. The three parts of the needle are so graded that the whole when assembled constitutes a long tapering needle which permits of easy access to veins its own size and to smaller veins by stretching of the vessel's walls and thus forcible entry. Venous walls are exceedingly elastic and a vein half the size of the needle can be stretched to the latter's diameter. In very small infants I have frequently used the superior sagittal sinus through the anterior fontanel, but in this section of the country there is so much prejudice to this route that I have practically abandoned it for another. Let me say, however, that using the Lindeman cannula, there is very little danger in using the sinus. The route referred to is through the saphenous vein where it reaches the surface just in front of the internal malleolus. This is one of the largest peripheral veins in the body and though it may be apparently too small it seldom fails to hold the needle. The vein is nearly always plainly visible, unless there is a heavy layer of fat, but if not visible it can be isolated with almost a single stroke of the scalpel, so constant is it in its relations to the surrounding landmarks. The vein is isolated by a one-half inch incision and entry with the cannula thus effected. It is essential to dissect the vein entirely free of all investing tissue or else the needle may be forced into a layer of its wall or into the integument. Because of the distance of this portion of the vein from the heart there is little backflow of blood which might act as a guide to insertion of the needle, a factor which makes the feat more difficult. Patience and continued practice, however, will render its accomplishment more easy from time to time. It is surprising how small an infant, using so large a cannula, can be transfused through this vein. It will be observed that three of the prematures in the chart weighed a little more, and one a little less, than three pounds. These, with one exception (Fontanel), were transfused through the saphenous vein. The incision made in this region results in a very small

scar which disappears in a few years, and should it not disappear in this location it is of no cosmetic consequence. As a rule, dissection of a vein in an infant or child above one year of age is unnecessary. Many use the external jugular to advantage, but I have been so unsuccessful in my attempts on veins of the neck that I have preferred to use that of the ankle.

Herewith is presented in very little detail sixty-one private cases. This display presents few unusual features but is merely designed to show my own experiences:

CHART SHOWING DISEASES, NUMBER OF TRANSFUSIONS EMPLOYED IN EACH, AND RESULTS

Disease	Number of Transfusions	Recovered	Died
BLOOD DYSCRASIA		14	1
A—Secondary Anemia	1 (5 cases) 2 (1 c) 3 (1 c)	7	
B—Hemophilia	1	2	
C—Henoch's Purpura	1	1	
D—Hemorrhagic Disease of New-Born	1	2	
E—Purpura Hemorrhagic	1 (1 c) Many (other case)	2	
F—Myelogenous Leukemia	1		1
PREMATURITY	2(2 c) 1 (5 c)	6	1
SEPSIS		10	1
A—Post-Opr. Mastoid with Sepsis	2 (6 c) 1 (2 c)	7	1
B—Sepsis from other causes	2	3	
PNEUMONIA		5	3
A—Lobar (Unresolved)	2 (4 c) 1 (2 c)	5	1
B—Bronchopneumonia	3 (2 c) 2 (1 c)	1	2
GASTRO-ENTERITIS		10	3
A—Dysentery	2-3 (4 c) 1 (1 c)	3	2
B—Acidosis Dehydration Syndrome	2 (3 c) 5 (1 c) 1 (4 c)	7	1
MISCELLANEOUS		5	2
A—Pre-opr. and Post-opr. Pyloric Stenosis	2	1	
B—Nephrosis	3	1	
C—Puerperal Eclampsia	1	1	
D—Uremia (Idiopathic)	2	1	
E—Burns	4		1
F—Icterus Gravis (New-Born)	1		1
G—Congenital Malaria	1	1	
TOTAL	100 Plus	50	11

Comment

So numerous are they I shall not name the varied indications for transfusion. The chief contra-indications to this measure, however, are (a) high blood pressure and cardiac decompensation, (b) those diseases which cause marked visceral congestion such as the early stages of the pneumonias (probably any stage of a bronchopneumonia) and the acute exanthemata, and (c) probably typhoid fever (except in hemorrhage) and tuberculosis. In all other conditions practically it would seem, if of no actual value, certainly to do no harm. Perhaps in bronchopneumonia it actually exaggerates the symptoms, though temporary amelioration in a few instances has seemed to follow. In unresolved lobar pneumonia transfusion seems to work like a charm bringing about a crisis and rapid resolution usually in thirty-six hours. One exception in this table

was a lobar pneumonia of the influenzal sort with the unusual complication of intestinal hemorrhage. The percentage of recoveries in cases of sepsis stands above ninety per cent. Here was usually seen a critical drop of temperature occasionally after the first transfusion but more frequently after the second. Percentage of recovery in the less toxic forms of gastrointestinal disease was high; in the dysenteries the mortality was high. The blood dyscrasias were improved in all cases, but it is recognized that transfusion, with exception of hemorrhagic disease of the new-born and in secondary anemia is only a temporary expedient. Miscellaneous cases recovered, with the exception of a peculiar case of icterus and a child with severe burns.

Conclusion

In treating this subject the blood transfusion I have purposely avoided a didactic discussion of the subject of blood groups and the technique of their determination. Likewise, treatment of other methods of transfusion seemed unnecessary. However, I should like to state in a word that several more recent features relating to transfusion are worthy of consideration in cases where they seem particularly applicable. The first is the exsanguination transfusion, in which the body is partially detoxicated by the removal of some blood thus enabling one to give a larger injection from the donor. This is particularly applicable in children, where more blood than necessary is usually available in the adult donor. Another refinement in transfusion in given cases is the use of the immunized donor. The chief difficulty here lies in the procuring of such a donor. Lastly, the use of fasting donors minimizes the danger of anaphylactic shock.

In summarizing I would say that (A) unmodified blood is superior to citrated blood because it contains both cells and immune factors unaltered; (B) that the Lindeman method is superior to all other unmodified procedures because of its simplicity; (C) that the age and size of the patient does not prohibit its use.

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A GOVERNOR LOOKS AT CHIROPRACTIC

Governor Buck of Delaware has returned to the Legislature, without his approval, a bill to create a board of chiropractic examiners and to regulate the practice of chiropractic. His summarization of the reasons for his veto is so clear and terse that it should be read by the legislators and governors of every State that is threatened or already afflicted with this cult. His statement follows:

The purpose of the act, as I understand it, is to legalize the practice of chiropractic in this State. Practitioners of this cult are not recognized now. Do they profess to be doctors in the same sense of the term as is commonly understood to apply to men and women of the medical profession? Insofar as I am able to determine, there is not a recognized medical school in the country that includes in its curriculum a course in chiropractic. This fact in itself seems singular significant.

Even to the lay mind the idea that all disease of whatever character is due to spinal displacements of a mild sort, and that cures of such ailments as tuberculosis, smallpox, diphtheria, scarlet fever and others can be effected by manipulation and fingering of the spine is preposterous.

Before returning this bill to you I have satisfied myself that the training and education a chiropractor, or drugless healer, needs to practice his art does not fit him properly to advisedly treat the sick, inasmuch as he is not qualified to diagnose ailments nor recognize communicable diseases and to take measures to control them. He is therefore an opponent to the department of health.

Wherefore, it seems to me it would be inconsistent for the Legislature to appropriate, as it will do, money for the State Board of Health, which board is trying to eradicate communicable diseases, and at the same time legalize the practice of a cult which does not believe in the germ theory of a disease but does teach and believe that such diseases as scarlet fever, etc., are due to a distracted vertebra and the method to prevent and cure such disease is to see that everybody has a normal spine.—*Journal A. M. A.*, April 4.

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

THE TEXARKANA MEETING

At the close of the annual meeting this year, Dr. D. A. Rhinehart of Little Rock automatically became President of the Arkansas Medical Society and Dr. Will H. Mock of Prairie Grove was elected President-Elect. Other officers elected are:

First Vice-President, L. J. Kosminsky, Texarkana; Second Vice-President, Wm. A. Snodgrass, Little Rock; Third Vice-President, A. Isom, Dumas; Treasurer, M. J. Kilbury, Little Rock; Secretary, Wm. R. Bathurst, Little Rock (re-elected). Councilors: W. M. Majors, Paragould; M. C. John, Stuttgart (re-elected); L. L. Purifoy, El Dorado (re-elected); Dewell Gann, Sr., Benton ((re-elected); D. L. Owens, Harrison.

Delegates to the annual meeting of the American Medical Association, to be held in Philadelphia in June are: E. F. Ellis, Fayetteville, and Wm. R. Bathurst, Little Rock.

Guest speakers included: Dr. Ralph A. Kinsella, St. Louis; Dr. Homer Dupuy, New Orleans; Dr. J. Hoy Sanford, St. Louis; Dr. Ira H. Lockwood, Kansas City and Mr. Victor Murdock, Wichita, Kansas.

Little Rock was chosen as the next place for holding the 1932 meeting. The invitation was extended by Dr. S. B. Hinkle, delegate from Pulaski County Medical Society.

The meeting on the whole was perhaps more beneficial to a greater number than any convention held in many years. A detailed report of the entire proceedings of the House of Delegates will be published in the July issue of the Journal, and the essays will appear in subsequent issues.

The Memorial service for the deceased during the fiscal year was held in the First Baptist Church. The invocation was delivered by Reverend M. T. Andrews, and the principal addresses were given by Dr. G. A. Warren of Black Rock and Mrs. T. M. Fly of Little Rock. The music was beautiful and appropriate and the service was solemn and impressive.

The attendance at the Convention exceeded all expectations, and the meeting place proved to be excellent in every detail. Thanks to the various committees of the Miller County Society.

THE AUXILIARY

The seventh annual meeting of the Arkansas Medical Auxiliary met in Texarkana, April 21-23, with Mrs. Chas. E. Oates of Little Rock, President, presiding.

The meeting opened with a President's and Past-President's breakfast, Tuesday morning, April 21, at the home of Mrs. S. A. Collom, President of the Southern Medical Auxiliary.

The executive session opened with a luncheon Tuesday at noon, and the general session was held at 2 p. m., both at the Hotel McCartney.

Mrs. S. A. Collom delivered the address of welcome on behalf of the Auxiliary of Texarkana, to which response was made by Mrs. H. H. Smith of Fort Smith.

Mrs. Hibbetts presented the State President, Mrs. Chas. E. Oates of Little Rock for a brief message of greeting and Dr. E. E. Barlow, President of the Arkansas Medical Society, delivered an interesting address.

Other honor guests were Mrs. A. A. Herold, President of the Louisiana State Medical Society Auxiliary and Mrs. C. R. Gowan, Vice-President.

A beautiful tea was tendered to the visiting officers and delegates from 4 until 6 o'clock, at the home of Mrs. William Hibbetts.

A joint memorial service with the State Medical Society was held at the First Baptist Church. A feature of the service was the placing of a white rosebud in a large cross of evergreen, as the name of each deceased member was spoken in memorial eulogy.

The business session immediately thereafter convened in the church, when reports were given by all officers, county presidents and committee chairmen. Mrs. W. R. Brooksher of Fort Smith reported as a delegate from the American Medical Association, held in Detroit, Mich., and Mrs. M. J. Kilbury, Little Rock, reported as delegate to the Southern Medical Auxiliary meeting in Louisville, Ky., last year.

Mrs. E. S. Beck of Texarkana presented the report of the nominating committee, which was accepted in its entirety. Mrs. W. R. Brooksher, Jr., of Fort Smith was elected President of the Auxiliary; Mrs. P. H. Phillips, Ashdown, President-Elect; Mrs. Barton A. Rhinehart, Little Rock, Vice-President; Mrs. G. A. Hebert, Hot Springs, Treasurer; Mrs. Marcus T. Smith, Conway, Publicity Secretary; Mrs. William Hibbetts, Texarkana, Parliamentarian; Mrs. C. W. Garrison, Little Rock, Historian. Directors named for two years are: Mrs. M. B. Russell, El Dorado and Mrs. James B. Crawford, Little Rock. Mrs. Brooksher announced as her appointee for secretary, Mrs. Pierre Redman.

The closing session was in the form of a luncheon at the Texarkana Country Club, with Mrs. William Hibbetts as toastmistress.

Mrs. Dewell Gann, Sr., of Benton was presented, and in her brief address, made the statement that the convention then in session was the forty-third State meeting of the medical society and auxiliary at which she has been in attendance.

Presidents of county auxiliaries introduced included Mrs. H. H. Smith, Fort Smith; Mrs. Anderson Watkins, Little Rock; Mrs. Curtis Jones, Benton, and Mrs. G. D. Murphy, El Dorado.

Mrs. Oates delivered her address as retiring President and installed the new officers, presenting to Mrs. Brooksher a State President's pin as a gift of the Auxiliary. Mrs. E. H. White of Little Rock read the resolutions, one of which was by Mrs. C. W. Garrison, eulogizing Mrs. Oates for her untiring service in carrying on the work devolving to her as president, and her efforts to establish the Student Loan Fund, which by action of the body will henceforth be known as the Ilse F. Oates Loan Fund.

Editorial Clipping

WHAT STATE MEDICINE IS AND THE ARGUMENTS FOR AND AGAINST

Frequent references are made to State Medicine, perhaps without any clear conception of what State medicine is. The American Medical Association defines State medicine to be any form of treatment, provided, conducted, controlled or subsidized by the federal or any State government, or municipality, except such service as is provided by the Army, Navy or Public Health Service and that which is necessary for the control of communicable disease, the treatment of mental disease, the treatment of the indigent sick, and such other services as may be approved by and administered under the direction of or by a local county medical society of which it is a component part.

It aims to provide adequate medical care for persons not otherwise able to command it. As carried out in a number of European countries all aim to provide a method of distributing the economic load of medical care by requiring a combination of contributions from the insured persons and employers, compulsory savings and indirect taxation. The government administers the fund thus accumulated and employs the physicians. In England for instance it is called the Panel system and physicians practicing under the system are called panel physicians. They get about $2,000 per year and are assigned to care for approximately 1,500 persons. All persons whose incomes are less then than 250 pounds a year are compelled to contribute to this fund and are eligible for treatment under the panel system.

Arguments favoring State medicine are that there is need for improvement of our existing system of medical service; that there is a large amount of unnecessary sickness; that it is the cause and result of much poverty, crime and delinquency; the prevention and cure of illness have by no means kept up with the advancement of medicine in the last fifty years; the inability of all but the wealthy to pay the cost of medical service; organization of medicine is needed to fully serve the needs of society; many rural communities are entirely without medical service and others are not adequately supplied; many people in cities find it difficult to get a good physician in case of need; many doctors cannot afford the expensive equipment now necessary for all-round practice in the most up-to-date manner; some doctors are more interested in the fee than the patient and give insufficient examination; the cost of medical care has assumed alarming proportions; doctors are not fairly paid under the present system; only a few earn large incomes; the efforts made by medical men to remedy the matter are insufficient.

Control of medicine by the State would remedy the matter; State medicine can reduce the cost of medical education; insure adequate financial compensation for physicians; raise the general standard of medical practice; remove competition; provide access to needed equipment.

Arguments against State medicine are that the mechanization of medicine resulting from State control would be a menace to sound medical practice; would interfere with the right of patient to select his physician; would interfere with intimate personal relationship of doctor and patient necessary for complete relief from patient's ills; it would interfere with the work of the general practitioner; would mean inadequate compensation for physicians; would lower standards of practice; patients would be moved along too fast; the doctor would tend to get into routine, losing initiative and individuality; would tend to throttle medical progress; socialization of medicine is against nature's law of the survival of the fittest.

State medicine has not been successful in other countries where it has been tried; it makes people morbidly interested in their physical progress; they demand time and attention of physicians unnecessarily; physicians do not favor it.—Neb. State Med. Jour.

Abstracts

ACUTE APPENDICITIS

In an endeavor to find the cause of the marked increase in the mortality of acute appendicitis, which amounted to 22.3 per cent in the United States and 18 per cent in Philadelphia between the years 1913 and 1923, John O. Bower, Philadelphia (Journal A. M. A., May 2, 1931), made a survey of the hospitals of the city to determine the cause of this increase. The clinical records of 5,121 patients in twenty-seven hospitals were studied, in the twenty-seven hospitals surveyed, 364 surgeons were operating, an average of thirteen to a hospital. A certain number had no mortality. In one hospital the mortality rate was 11.2 per cent; several surgeons in this group had no mortality. One had a mortality of 20 per cent and another 3.3 per cent. The mortality from appendicitis decreases with the experience of the surgeon. This is uniformly true in the management of the abnormally situated appendix and in that all important factor in the mortality of acute appendicitis, general peritonitis. In no disorder of the human body does surgical judgment influence the outcome so frequently or so markedly as in general peritonitis. There is a common belief that there is no mortality in appendicitis if operations are performed early, but this survey shows that 1 patient in every 39 dies even if operation is performed within twenty-four hours; if within forty-

eight hours, 1 in 17 dies; seventy-two hours, 1 in 13; over seventy-two hours, 1 in 9. The average time that elapsed between the onset of symptoms and the operation of those who lived of the 5,121 patients was 60.1 hours; of those who died, 97.7 hours. A patient in good physical condition in 99 instances out of 100 is safe if operated on within the first twelve hours. In this series, gangrene of the appendix, with general peritonitis, had taken place as early as six hours from the onset of pain. Without exception, patients developing perforation with fulminating peritonitis before twelve hours have been given laxatives. Of the 5 121 patients, 306 died. The cause of death in 224, or 73.2 per cent, was general peritonitis. Of the 306 deaths there were only 160 patients in whom a history regarding laxatives was obtained; 131 of the 160 had a general peritonitis; 124, or 98.4 per cent, of the 131 had had a laxative. It would be presuming too much to say that laxatives caused the death of all these patients, but delay and laxatives were the cause of the majority of them. Localization of the infection either in the appendix or directly outside, resulting in a local peritonitis, takes place when the intestines are quiet—increased peristalsis, increased intra-apendical tension, perforation, general peritonitis, overwhelming intoxication and death follow the administration of laxatives. These records show that if a patient who has a fulminating appendicitis is given a laxative and develops a general peritonitis, he has but one chance in seven of recovering. With regard to the diagnosis of appendicitis the author states that only one symptom is always present—pain. Only one sign is uniformly present—tenderness (absent in 11 per cent). There is only one corroborative test—the leukocyte count (absent in 20 per cent).

RINGWORM OF FEET

William L. Gould, Albany, N. Y. (Journal A. M. A., April 18, 1931), emphasizes the importance of foot baths containing from 10 to 15 per cent sodium thiosulphate in the treatment of ringworm of the foot. If the foot was not entirely immersed in the solution the results would not be so successful, because all the parts of harboring the organisms would not be reached. Swabbing is usually done on the more apparent areas and not the more obscure, where the tinea may be just as plentiful as a constant source of reinfection. It undoubtedly is frequently not so much the medicament that fails as it is the mode of its application. The bath is unhandy at times, however, and a 20 per cent powder of sodium thiosulphate in boric acid has been tried with much success on feet, footwear and floors. The powder is more easily applicable and as with the bath may readily be placed on the entire foot, especially between the toes, about the nails and beneath the soles. It is quickly applied to the sock and inside the shoe. A light dusting is all that is necessary. It has been found ideal at times to step into the bath and later use the powder locally. The powder may regularly be dusted on the feet and footwear night and morning for prevention and comfort.

Personal and News Items

Dr. W. B. Grayson of McGehee has returned from Rochester Minn., where he has been taking post-graduate study.

On April 27, Dr. John Shea of Memphis addressed the Pulaski County Medical Society.

Dr. and Mrs. Paul Mahoney and Dr. Dewell Gann, Jr., Little Rock, have returned after a trip to the principal cities in Europe.

We regret to announce the death of the wife of Dr. W. C. Dunaway, Little Rock, May 16, 1931.

The Co-operative Committee on Fractures, appointed by the section on surgery and orthopedic surgery, have invited Dr. F. Walter Carruthers of Little Rock to aid in their demonstrations on fractures during the meeting of the American Medical Association in Philadelphia, June 8-12, 1931.

Dr. Geo. F. Jackson of Little Rock, accompanied by Mrs. Jackson, attended the recent National meeting of the Kiwanis Clubs at Miami, Florida. Following the convention, they sailed to New York, and on their return visited in Philadelphia, Baltimore and Washington.

Dr. C. Travis Drennen of Hot Springs received the distinction of an honorary life membership in the National Congress of Parents and Teachers, an honor which falls to few. There have been but four such honors conferred in Arkansas, and Dr. Drennen's is the only one to be awarded to a Hot Springs resident. This was awarded him by the Rix school for generous help, loyal encouragement and faithful service.

Dr. W. A. Snodgrass of Little Rock was appointed a member of the State Board of Medical Examiners by Governor Parnell to succeed Dr. W. A. Montgomery of Atkins, whose term had expired. The appointment was for four years. Dr. W. W. York of Ashdown and Dr. W. W. Verser of Harrisburg were reappointed for four year terms.

The Council on Physical Therapy has not considered or approved any electromagnetic wave generators producing wave lengths shorter than the short waves commonly used in radio. There has been some research in the field to determine the physiological effects but as yet there has been no conclusive scientific evidence accumulated. The work of the Western Pennsylvania Hospital Institute of Pathology has never been verified by the Council on Physical Therapy.

Experiments with rats and mice have shown that energy in the short wave lengths will raise the body temperature of the animals and a short exposure under proper circumstances will produce death.

The State Board of Examiners of the Arkansas Medical Society, at its annual business session held in Little Rock, May 12 and 13, elected Dr. W. W. Verser of Harrisburg, as president of the board to succeed Dr. W. A. Montgomery of Atkins, whose term as a member of the board had expired. Dr. W. A. Snodgrass of Little Rock was appointed to succeed Dr. Montgomery.

Dr. A. S. Buchanan of Prescott was elected vice-president and Dr. Sam J. Allbright of Searcy was re-elected secretary-treasurer. Dr. A. S. Buchanan and Dr. W. T. Lowe of Pine Bluff were elected members of the Credentials Committee.

The board revoked the license of Dr. J. R. Story of Dierks on complaint of the Howard County Medical Society, which charged that Dr. Story had distributed advertising circulars, containing unethical claims regarding cures of certain diseases.

Other members of the board present were, Dr. W. W. York of Ashdown and Dr. Will H. Mock of Prairie Grove.

The University of Arkansas School of Medicine has entered into an agreement with the city of Little Rock whereby it will take complete charge of the professional care of all charity patients admitted to the Little Rock General Hospital. Under this plan all members of the faculty will become staff members of the hospital and be on a continuous service in the care of charity patients, thus insuring adequate teaching facilities in all subjects of the clinical curriculum.

After the crash is over,
  Now that my stocks are gone;
(What few stocks remain
  Are writhing in pain
  Deflated, depleted, forlorn)
After the Bank's Caesarean
  When the dear old panic was born,
  General Practice *now looks good* to me,
After the storm.

After the crops were gathered
  And the profits were just "Apple Sauce"
And the cows had T. B.,
  And the chickens you see
Laid eggs that were picked at a loss
  When the turkeys croaked with Angina
Glassy eyeing their M. D. boss
  Old G. P. *now* looks good to me
After their loss.

Now that the winter's over
  The frost and icicles gone
With its rain and its mud
  And its wind and its flood,
And the starter stuck in the morn;
  With roses and buttercups blooming
And tulips fringing the lawn,
  By Gosh! Old G. P. *now* looks doubly good to me!
  After the storm.

—*Tonics and Sedatives—Jour. A. M. A.*

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Obituary

MANN, ROBT. HOWELL TAYLOR—Dr. R. H. T. Mann, Texarkana, aged 63, one of the founders of the Texarkana Hospital and long prominent in medical circles of Arkansas died April 17, after an extended illness.

He was born in 1868 at Brownsville, Tennessee, and was graduated from Vanderbilt University in 1893 and moved to Texarkana a year later. He was president of the Arkansas Medical Society in 1929.

His widow, two daughters, Mrs. Malcolm Gannaway, Little Rock, and Mrs. David Bruton, Houston, Texas, and a son, Dr. Albert Mann, Texarkana, survive.

TURNER, SHELBY A.—Dr. S. A. Turner of Heber Springs, aged 53, died April 10. He was stricken while serving in the Legislature and was removed to the Army and Navy hospital at Hot Springs, February 27.

During the World War Dr. Turner served in the Medical Corps. He had been a practicing physician at Heber Springs for twenty-five years.

He is survived by his widow, four daughters, Misses Faye, Floye, and Peel Turner of Heber Springs, and Mrs. Nicholas Wilson of Memphis; by one brother and two sisters.

RYAN, ISAAC A.—Dr. I. A. Ryan of Fort Smith, aged 70, died April 9. He was born at Dardanelle and attended public schools there and the University of Arkansas, graduating from the School of Medicine in 1887. He began his practice at Barling and six years later moved to Fort Smith, where he practiced until his retirement.

Surviving are his wife; two daughters, Miss Rose Ryan of Washington, D. C., and Mrs. Ruth Carstensen of Fort Smith, and two sons, Porter Ryan of Wichita, Kansas, and Ed Ryan of Fort Smith.

SHEPPARD, JULIUS KELLY—Dr. J. K. Sheppard of El Dorado, aged 57, died May 12, 1931. He was seemingly in good health and death was very unexpected, being alone in his office.

He is survived by his wife, two sons, Julius a student at the Medical College, Arkansas University, and Jack of El Dorado; four brothers, Dr. J. M. Sheppard of El Dorado, J. J. Sheppard of Azura, Calif., Dr. F. C. Sheppard of Mangham, La., and W. M. Sheppard of Three Creeks.

County Societies

LAWRENCE COUNTY

(Reported by H. R. McCarroll, Sec.)

The Lawrence County Medical Society met in regular session in Walnut Ridge, April 14, as guests of the Secretary, H. R. McCarroll. Present: Allen, Ball, Hatcher, Henderson, Hughes, Land, McCarroll, Neece, Robinson and Warren. Visitors: Haltom and Jackson, Jonesboro; Carruthers, Little Rock; Hutcherson, Delaplaine; Hull, Mammoth Spring; Kendall, Strawberry; Majors, Paragould; McCurry, Cash, and Poindexter, Hughes.

Dr. W. M. Majors of Paragould read an excellent paper on "The Acute Surgical Abdomen," which was a wonderful compilation of facts and a very timely subject. Dr. Walter Carruthers of Little Rock gave a real treat in his paper, "The Diagnosis and Treatment of Fractures," and supplemented it with lantern slides. Every one enjoyed the paper and pictures very much. Some said that it was the best treatise on the subject they had ever heard. These men made sacrifices to give their time and these instructive papers for which the Society desires to express its thanks.

Dr. G. A. Warren installed the officers elected at the previous meeting.

INDEPENDENCE COUNTY

(Reported by Frank A. Gray, Sec.)

The Independence County Medical Society met in Batesville, April 13, with a six o'clock dinner at the Johnson Hotel.

Present: Hooper, Churchill, Johnston, Evans, Rodman, Dorr, Hinkle, C. C. Gray and F. A. Gray of Batesville; McAdams of Cord; Sullivan of Poughkeepsie; Laman of Cave City; Bone of Newark, and E. M. Gray of Evening Shade. Visitors were: Baxter

of Melbourne; Jones of Calico Rock; Warren of Black Rock; Guthrie of Smithville; Kendall of Strawberry; Hardaway of Lynn; Rogers of Searcy, and Allen, Lewis and Kilbury of Little Rock.

The following program was rendered:

"Tuberculosis," by T. C. Guthrie.

"Common Diseases of the Rectum," by Hoyt Allen.

"Chronic Appendicitis," by Geo. V. Lewis.

"Osteomyelitis," Porter Rogers.

The visiting physicians from Little Rock were delighted with the city and beautiful scenery, and made special mention of the scenery coming down the mountain to the bridge.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in regular session at Wilson May 12, 1931.

Present: Johnson of Bassett; Sheddan and Harwell of Osceola; Barksdale, Ellis and Barrett of Wilson; Saliba, Washburn, Wilson, Husband, Tipton and Smith of Blytheville. Visitors: C. H. Glover, R. E. Flack, W. W. Walker, and M. W. Searight of Memphis, Tenn.

Scientific program was as follows:

"Prenatal Care," W. W. Walker.

"Early Symptoms of Tuberculosis," R. E. Flack.

The next meeting will be held in Blytheville the second Tuesday in June.

Book Reviews

Symptoms and Diseases Applied. Questionnaires. Differential Diagnosis. Mathematical Diagnosis.—By W. L. Kitchens, M. D., Texarkana U. S. A. Price, $10.00.

The editor would much prefer to exhibit the values of this unique book than attempt to write a review.

The author does not claim to present any new symptoms of diseases but he has arranged and numbered the most common symptoms and diseases, whereby, those following this system of diagnosis will arrive at the same diagnosis, and as correct as is humanly possible to do so.

Part one presents: "Symptom Index"; subjectively, objectively, and laboratory tests.

Part two: Examples of Diagnosis; Symptoms with Diseases Applied. In this section, he places each of the symptoms of Part One, on a separate page and numbered this page the same number as the symptom number, and applied the diseases that produce the symptom.

Part three: Disease Index. Is formed by making an alphabetical list and numbering the diseases.

Part four: Diseases with Symptoms applied. The author formed this section by placing each one of the 416 diseases on a separate page and numbering this page the same number as the number of the disease, and applying the symptoms with their number to each disease.

Part five: Questionnaires. Formed by selecting the most diagnostic symptoms under certain diseases and arranging them in the form of systemic questionnaires.

We consider this book a "dictionary of symptoms and diseases." Also it may be regarded as a "quick reference work." Select any symptom. For example: "High blood pressure." The Sympton Index shows its number to be 295 and the "Note at the top of the column of numbers" directs you to this page in Part II, where you will find "High blood pressure," with 18 diiseases applied. Each disease listed here has a number and the "Note at the top of column of numbers" directs you to that page in Part IV where you will find the disease listed with its applied symptoms. For example, "183—Interstitial Nephritis." Turn to page 183 in Part IV, and you will find this disease with 36 symptoms applied. Each symptom under Interstitial Nephritis has a number that directs you back to that page in Part II where you will find that symptom with its diseases applied. For example, "Cardiac Hypertrophy," number 312. Turn to this page in Part II and you will find this symptom with 21 diseases applied.

As an aid in diagnosis, select any two symptoms. For example, "Jaundice and pain in the right Hypochondrium." The symptom index shows their numbers to be 404 and 36. Turn to these pages in Part II and you have before you the diseases that produce each symptom. To find the diseases that may

produce both symptoms, just fold the pages over so that you can see both columns of numbers and check down the columns and see what numbers are listed in both columns. You will find the following nine numbers: 29, 77, 78, 81, 144, 196, 198, 200 and 203. These are the numbers of the diseases that may produce both symptoms, and all other numbers, or diseases, are eliminated. Check these nine numbers through 160, "Chills and Fever," and you find that only three of them are listed here, viz: 29, 81 and 196. Check these three numbers through 356, "Liver Enlargement," and you find only one of them here, viz: 196. This is the diagnosis, as it is the only number or disease that was listed under all four symptoms selected. 196 is the number of "Liver Abscess," and if you turn to page 196 in Part IV, you will find the above four symptoms applied under it, as well as the other most common symptoms produced by this condition.

It is better to write down all the numbers of the diseases under each symptom and check through and see if any number is listed under all of the symptoms found; if not, there must be a complication of diseases. When you will select the most applicable number for your diagnosis, and also the second most applicable number that includes the symptoms not found under the most applicable number for your complication.

This method of diagnosis differs from the usual method only in that diseases are eliminated by numbers, and a diagnosis is made with the use of a pencil and paper instead of a mental elimination of diseases by name. The latter affording a wide range for disagreement in arriving at a diagnosis.

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Original Articles

THE SEASONAL POLLENOSIS CASE*
Diagnosis and Treatment

ALAN G. CAZORT, A. B., M. D., Little Rock

It is not the purpose of this paper to go into the various manifestations of allergy. All are not yet known. The choice of a topic for discussion was determined by a survey of case histories which revealed the fact that the greatest number of people manifesting symptoms of allergy go to the physician because of seasonal pollenosis, and that many of them have been unsuccessfully treated. These cases are above all others the easiest to diagnose and if properly diagnosed and treated can expect relief. Duke (1) states that if pollen therapy is adequately and scientifically given, relief can be obtained in practically every case.

Balyeat (2) estimates that one per cent of people in the United States have hay fever and that 65 per cent of hay fever patients develop asthma. During a period of low immunity these cases pass rather abruptly into an atmosphere laden with a substance very toxic to them. The symptoms are therefore acute and may even result in several weeks of disability. To say the least the pollenosis case is miserable, and transmits a part of his misery to all with whom he comes in contact.

This condition may persist from several days to months. In fact a multiple pollen case may have a perennial succession of seasonal exacerbations. Generally speaking, the more strictly seasonal a case is, the more acute symptoms are apt to be, though a given patient may be by no means limited to one season a year. The commonest causes of the very acute cases in and immediately surrounding Arkansas are: Elm in February and March; Oak in March and April; Hickory through April and into May; Ragweed from late August until frost or later. Grass cases have a much longer period even when purely seasonal, but vary much with the weather. A person sensitive to the pollen of one grass is, in my experience, sensitive to other grasses. Dr. J. H. Black (3) of Dallas agrees in this observation. Grasses in Arkansas bloom from March till after frost and constitute a very big factor in perennial asthma and hay fever. They pollenate most abundantly with and after the spring and fall rains so that even the most sensitive patients get some relief during the dry summer months. Fortunately grass cases usually have less acute symptoms than do those sensitive to some other plants which begin to pollenate more abruptly and profusely. Bermuda is the commonest of several grasses which cause trouble in Arkansas.

Not only does the seasonal case suffer; not only is he an apt victim for sinus infection and asthma; but also he is frequently under a big economic handicap from four to ten or even twelve weeks of the year. A prominent lawyer estimated that he had worked at only 25 per cent efficiency from March 20th, till May 1st, each year for ten years. Another had been able to spend only an hour or so in his office each day from the middle of February to the middle of March for seven years. An insurance agent whose best business is in September and October had left his business during those months to seek relief in the Rocky Mountains. A house wife had shut herself up in an insufficiently ventilated house during the hot fall months, thereby working a hardship on her family, for seventeen years. The superintendent of a large hospital, while not disabled for her particular administrative work, had sought refuge about the great lakes, but had found little relief. These

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long vacations and expensive trips represent an economic loss which few people can bear.

The outlook for the untreated pollenosis case is not good. Almost invariably he can expect many returns of the unhappy season, with a tendency to suffer more each time. Some cases simply continue from year to year with little change. Spontaneous recovery occurs but is rare. More often a rather definite and unhappy course of changes follows. Asthma begins, and is worse each season. Other sensitizations develop and the case becomes perennial. Chronic bronchitis and bronchiectasis progress and fibrosis begins to manifest itself by embarrassment of the pulmonic circulation. The next step is dilatation of the right side of the heart. The asthma loses the character of the bronchial type for that of the cardiac. Peripheral edema is noted and the patient presents the typical picture of failing circulation. A confusing feature of the case even at this stage is that the blood pressure, the electrocardiagram, and the urinalysis may vary little from the normal. The patient however is in a serious condition.

The two lawyers, the insurance agent, the house-wife, and the hospital superintendent mentioned above are representative of patients seen by the allergist. They are representative too in another and a most significant way. Three of them had been correctly diagnosed in so far as the offending pollen was concerned and two had had one or more seasons of treatment with no relief. One had himself diagnosed the offending pollen correctly, but knew a friend who "took the shots" without relief. All could have had ninety per cent or better relief, as subsequent seasons have shown.

There are three very definite reasons why pollen therapy has been unsuccessful:

1. The diagnosis of the primary cause has been incorrect.

2. The diagnosis has been incomplete.

3. Treatment has been insufficient.

Number 1, an incorrect diagnosis happens infrequently. The chief danger here lies in the failure to properly correlate the skin tests, the symptoms, and the time, distribution, and abundance of the pollen. A failure due to incorrect diagnosis has occurred but should be about as rare as treating a senile dementia for infantile paralysis.

Reason No. 2, an incomplete diagnosis, is a more common cause of failure and is deserving of emphasis because until recently it has been largely overlooked. It is necessary to find the other inhalants and foods, the secondary factors, to which the patient may be sensitive if the maximum benefit is to be obtained for the greatest number of patients. Otherwise one may build the tolerance for a specific pollen high, but do the patient little good. Rowe (4) urges routine tests to ascertain unsuspected factors. Eyermann (5) has found that the elimination of foods to which the patient is sensitive aids very materially in treatment. Cases which had formerly had unsuccessful pollen treatment responded well after secondary factors were found and avoided. Several purely seasonal cases obtained relief by the elimination of specific foods without any pollen therapy.

The following cases illustrate the necessity of a rather complete preliminary examination:

Case No. 1, Mrs. M. J. L. had had hay fever of a severe type for sixteen years. Symptoms began about August 25th and lasted into October. She had had some allergen tests which showed sensitization to ragweed pollen and to that of some domestic flowers. She had had two seasons of pollen therapy, but obtained no relief. At routine examination two years ago she was found markedly sensitive to orris root. Since her symptoms were purely seasonal orris root, a constituent of certain cosmetics, had never been suspected. The next season she was desensitized with ragweed extract and orris root was avoided. She had no hay fever except for regular attacks which were precipitated once a week when she attended a bible class. These attacks were severe, but quickly subsided after returning home. The next year she used orris root free cosmetics, avoided crowds, and had no trouble. The pollen therapy was of course repeated.

Case No. 2, J. E. C. had had hay fever twice a year, spring and fall, for eight years. The seasons corresponded in time with the pollenating periods of Elm and Ragweed respectively. Skin tests to Elm and to Ragweed were markedly positive. In addition the tests to beans, peas, and peanuts were strongly positive. The patient was first seen a week or two after the onset of the spring attack. He was told to omit the leguminous foods from his diet and was given daily

treatments with Elm pollen extract. Symptoms were almost completely cleared up within forty-eight hours. In the fall he had no trouble from the ragweed for which he was being treated. While entirely free from symptoms he ate some peanuts. This was followed within half an hour by an acute attack of hay fever which lasted several hours.

Case No. 3, Mr. I. C. B., shows a skin sensitization to Grasses, Oak, Maple and to Ragweed, and has symptoms with exacerbations which correspond. In addition he has a positive skin test to carrots, peas, corn, Irish potato, oats, asparagus, tomato and banana. Several times while being treated he has eaten these foods and has always had an exacerbation of symptoms. He is less sensitive to several other foods which he is unable to prove to be clinical factors. During the hot dry summer months and during the cold winter months he tolerates the above foods fairly well.

Similar observations have been so common in other cases that I would hesitate to advise treatment of a pollenosis cases without preliminary routine examination. It is probable that secondary sensitizations may account for some systemic reactions following pollen treatment.

It was formerly my belief, it is now my conviction, that the majority of failures are due to insufficient treatment. The unsuccessfully treated cases have usually had about fifteen doses of pollen extract standardized and prepared by some of our leading pharmaceutical houses. Let me state without qualification that there is no way by which we can tell just how much treatment will be necessary for a given case. Rarely will fifteen doses be found sufficient. If fifteen doses were prepared, the highest being of sufficient potency to protect the average case of ragweed or of oak pollenosis, anaphylactic shock would be common and few patients would have the temerity to continue treatment after a few doses.

As in general medicine, each patient is an individual problem, though not a difficult one usually for the physician watching each reaction to solve. Each will tolerate a different beginning dose and each will tolerate a different rate of increase. One patient may require a beginning dose as low as .05 cc. of a 1:100,000 solution with forty doses to attain clinical immunity while another may tolerate .1 cc. of a 1:1,000 solution and require a total of no more than a dozen doses. Too, the amount of pollen in the air varies from one year to another so that the same patient may require more treatment one year than another.

My object with each patient requiring desensitization is to reach a tolerance of 3 cc. of a 1:20 solution of Ragweed or oak, both heavy pollenators, by the beginning of the season, whether it require ten or fifty doses. Patients in this locality rarely suffer if this tolerance is attained and sensitizing secondary factors avoided. If an occasional case requires a higher dose it can be cautiously raised during season. Cases due to less abundant pollenators do not require such high dosage. With grasses however a high tolerance is desirable as it will protect the patient in any locality at any time, and may allow treatments to be given as far apart as two weeks.

Desirable as temporary relief may be, our goal should be permanent immunity. We have not yet learned the requisites for this. It seems certain however that the longer treatment is successfully given the better is the chance for permanent immunity. Some very few seem to have obtained immunity with one season of treatment. Others possibly will never become immune. My patients are given the choice of seasonal or of perennial treatment. That is, they are desensitized each year, or if they choose are given a large dose every two weeks between seasons and as often as is necessary during season. Several have elected the perennial treatment in the hope that permanent immunity is more probable. It is too early to say whether this plan is better. Dr. Kahn (6) of San Antonio, Texas, objects to it because he has found systemic reactions to be more common. Rather the opposite has been true in my experience.

An occasional patient objects to treatment because he has had pollen therapy and reacted with severe systemic symptoms. Most of these reactions have been entirely unnecessary, but when they do occur are usually quickly and easily controlled. They seem to be due to too large a dose or to too rapid diffusion of the extract into the blood or lymph channels. Let me repeat that each patient is a separate problem and can be desensitized at only a definite rate. Any attempt to standardize treatment can only detract from the individualization of treatment. From the skin test the size of the appropriate be-

ginning dose can be estimated. After this the local reaction is an index to the size of the next dose. Time is not given to go into this matter in detail, but the literature abounds in good methods of administering treatment. Any allergist will be glad to give his particular method on request. As to the matter of systemic reactions, Duke (7) has discussed an excellent plan to avoid them in The J. A. M. A. for March 15, 1930.

SUMMARY

In this paper no attempt has been made to theorize nor to discuss problems of allergy now in the experimental stage. It is a plea for a more serious consideration of the case of seasonal pollenosis. These patients suffer acutely several weeks in each year. They are under a big economic handicap. They face an unpleasant future. Few of them have had the best results from treatment which it is possible for the physician to give. Many have received more harm than benefit from treatment. Every one of these cases will get a large measure of relief and most of them will get better than ninety per cent relief even the first year of treatment if the following conditions are fulfilled:

1. The offending pollen or pollens are correctly diagnosed.

2. Other inhalants and foods to which the patient is sensitive are ascertained and avoided.

3. Desensitization with a potent extract of the offending pollen or pollens is carried sufficiently high.

1. Duke, W. W., Asthma, Hay Fever, Urticaria and Other Manifestations of Allergy; C. V. Mosby Co., p. 242.

2. Balyeat, R. M., Hay Fever and Asthma; F. A. Davis Co., p. 12.

3. Black, J. H., Dallas, Texas. Personal Com.

4. Rowe, A. H., Journal of Allergy, September, 1930, Vol. I, No. 6, p. 531.

5. Eyermann, Chas. H., Journal of Allergy, May, 1930, Vol. I, No. 4, p. 350.

6. Kahn, I. S., San Antonio, Texas. Per Com.

7. Duke, W. W., New Method of Administering Pollen Extract for Purpose of Preventing Reactions. J. A. M. A., March 15, 1930, Vol. 94, No. 11, p. 767.

OXYGEN IN "GAS INFECTION"*

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The development of gas in the tissue subsequent to wound infection has been known for centuries. The reason for it has remained an enigma until 1892. Prior to this our knowledge dealt with the clinical description rather than with the etiology. The clinical picture once seen and studied yields a mental negative that never fades. For the first five to ten hours nothing characteristic is noted. The tissues surrounding the injury may be bulging and slightly swollen. A careful palpation may yield a slight crepitation even at this early stage. During the next five to ten hours a decided change ensues. There is a definite fullness about the wound with very little discoloration since inflammatory reaction is not the rule, pallor with indistinct mottling is more common, due to the hemolytic action of one fraction of the toxin: palpation yields crepitation which associated with the swelling has been called "foamy" tissue. This picture soon passes into the stage of marked distension of the parts with stretching and strutting of the skin and beginning gangrene. The gangrene usually progresses rapidly till death ensues. In the past decades prior to 1917 death was rarely cheated by recovery.

In 1892 Welch and Nutall (1) isolated an organism from a cadaver dead 8 hours. This is the organism spoken of today as the Bacillus of Welch despite the fact that they named it bacillus aerogenes copsulatus. Frankel (2) in 1893 isolated a similar organism from gaseous phlegmons and called it Bacillus phlegmonis emphysematosa. This later proved to be the same organism as that isolated by Welch, et al. Veilon and Zuber (3) isolated the same organism and called it Bacillus perfrigens. This organism is a short, square ended Gram positive, non-motile encapsulated bacillus frequently forming chains and requiring rather definite anaerobosis for active growth. It grows readily in milk and if in an anaerobic jar will coagulate the milk with production of large quantities of gas. It is usually identified from the stained smear; anaerobic cultures and from guinea pig injection. The chief point of interest is it's anaerobosis and ability to split the various sugars.

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The organisms are introduced into the tissue in anaerobic states. Dead muscle furnishes an excellent culture medium. The muscle sugars are split with abundant gas formation, together with lactic and butyric acid. Other toxic factors have been identified. One fraction shows marked hemolytic activity while the other does not cytolize the blood but is distinctly toxic. Bacillus Welchi was present in about 72 to 80 per cent of cases of gas gangrene studied during the World War, and has been found about as frequently in civilian cases. The development of gas gangrene depends on the virulance of the strain of B. Welchi; the amount of dead tissue present and the anaerobic conditions in the wound. There are very few organisms aside from Bacillus Welchi which are able to form gas in the tissues. These are: Vibrion Septique; Oedematiens and Fallax. The colon bacillus has been known to produce gas in wounds of diabetic patients since the blood and probably the muscles carry a high charge of glucose and glycogen. In addition to the bacterial factors it must be remembered that fractured ribs with penetration of the lung may show gas in the tissue of the chest and about the neck and shoulder. Manipulation of an extremity carrying an open wound and fractured may show air bubbles in the soft parts if the X-ray is used in study. Failure to obliterate dead space in the soft tissue at the time of operation may show gas roentgenologically. The gas formed by Bacillus Welchi carries between 65 and 70 per cent of hydrogen and will burn if ignited. It assembles into small bubbles as it is produced and is scattered rather diffusely as the infection spreads. This gas has a marked tendency to remain discreet rather than to pool as is the case with infused gases. These small bubbles tend to compress the living surrounding tissues, cutting off the blood vessels and probably lymphatics and at the same time widen the natural lines of clevage or septa. This combined action favors the growth and spread of the infection and at the same time retards the defenses of body structures.

The orthodox treatment prior to 1917 was free open drainage with generous debridement. During that year Bull and Pritchett (4) were able to prepare a soluble toxin, which when injected into suitable animals produced a potent antitoxin; possessing protective and curative properties against Bacillus Welchi. From these studies has grown the present Perfrigens antitoxin. The combination treatment of surgery and serum therapy has strangled most of the mortality of gas gangrene, morbidity offers opportunities for further research. This has been approached with the full appreciation that the organism was an obligate anaerobe. This being true the presence of oxygen, or a substance that would generate oxygen in the tissues would retard the growth or kill the organisms. This thought has been in my mind for the past five years and with your indulgence I should like to report six (6) cases which have a definite bearing on the question and have possibly paved the way for a new agent in the treatment of gas gangrene.

Case No. 1, Mr. W.:

This case came to the General Hospital August 16, 1926, with a history of having his right hand and forearm crushed and torn away in a meat chopper. The arm was promptly amputated below the elbow and the usual orders written for subsequent care.

The following morning showed clearly that the tissues about the elbow and lower part of upper arm were distended. Palpation yielded the sensation of gas in the tissues. The arm was again amputated at about the junction of the upper and middle third. Some crepitation could be made out along the line of incision. During the next few hours it became evident that the organisms were growing in the stump. Further operation would have necessitated removing the tissues about the shoulder. The serum was not generally known at that time. Knowing that the causative agent, Bacillus Welchi, was an obligate anaerobe and that possibly the presence of oxygen in the tissue would retard the spread, and not knowing the use of free oxygen, we decided to infuse hydrogen peroxide into the tissues around the shoulder. About 160 cc. of commercial hydrogen peroxide was used. The infection did not extend beyond this barrier; 50 hours later serum arrived from Philadelphia and was used. There was tremendous sloughing from the hydrogen peroxide, but in time the patient made a complete recovery. This patient taught me three things, A, that commercial hydrogen peroxide will produce oxygen in the tissues but that terrible necrosis and sloughing ensues. B, that perfrigens serum was a reality and would be more extensively used in the future. C, that

if the opportunity ever arrived, I would use oxygen gas instead of hydrogen peroxide. The study of oxygen gas was again pursued in 1929. When it was my privilege to use it intravenously and into the tissues in both animals and man.

Case No. 2, Mr. I. G.:

This case Mr. I. G. presented the opportunity to use oxygen infusion into the tissue following a wound bearing evidence of gas bacillus infection. The patient suffered a compound comminuted fracture of both bones of the right forearm and arrived at the hospital February 2, 1930, eight to ten hours subsequent to the fracture. The arm was splinted to await development of infection which seemed inevitable. Two days later infection was well developed. Two days later the surgeon believed he could palpate gas in the tissue about the wound and up to the elbow joint. On February 6, 1930, the condition warranted a diagnosis of perfrigens infection. This was confirmed by the X-ray and laboratory findings. On the following morning the patient was given 80 units of perfrigens serum and 100 cc. of oxygen infused into the tissue around the wound and up the arm over the biceps muscle. Some of the oxygen reaching the axilla. On the morning of the following day he received 40 units more of perfrigens serum and 50 cc. of oxygen. During the evening of the same day he received 40 units more perfrigens serum and 100 cc. of oxygen. Adequate surgical drainage was in effect throughout. The subsequent course of this case is rather long but pertained to eliminating the usual infections and getting union of the bones. The threatening state caused by the gas bacillus promptly faded never to return. At no time was there evidence of extension of gas due to the perfrigens bacillus above the collar or cuff of oxygen infused into the tissue. It was not believed that the oxygen had any deleterious effect on the tissues infused.

Case No. 3, Mr. W. L. K.:

This patient fell, running a large splinter deep into the tissues between the tibia and fibula just below the knee. Within the next 12-16 hours the area became tender and reddened. The patient appeared toxic. He was brought to the Baptist Hospital 30 hours or more after the injury. At this time the area showed very little swelling, some redness but distinct tenderness. Careful palpation of the soft tissues suggested crepitation due to gas in the tissues above the point of injury; X-ray study confirmed the presence of the gas. He was taken to the operating room where free drainage was established. Perfrigens serum was administered 45 cc. as boy was about 7 years old. The temperature ranged as high as 103 with pulse 130. Wet dressings were applied.

On the following day the temperature was still up to 103 or better, pulse 130, patient toxic. The gas had increased in amount and spread to the popliteal space. He was taken back to the operating room where more liberal drainage was established. He was given 45 cc. more perfrigens serum at this time. Following the operation more than 260 cc. of oxygen was infused into the tissues about the wound, in the popliteal space and in a cuff formation around the leg just above the knee.

The following day showed some general improvement in the patient. The temperature remained around 101, pulse 120. The local area was pronounced satisfactory. The following day 3 cc. of 1 per cent mercurochrome was given intravenously. The following day showed temperature and pulse on the normal lines. There was still plenty of gas due to oxygen in the soft tissues about the knee, but there was not the slightest evidence of progress due to the gas bacillus infection. In short the gas infection faded out of the picture promptly and completely. The oxygen remained on guard in the tissues for the next 3 or 4 days without the slightest discomfort or evidence of injury. The patient did not run a temperature during his convalescence and after a few days the local necrosis and infection about the wound subsided and the boy went home. The laboratory report (routine) was negative. This report cannot be ignored, but should be weighed against all the clinical and physical, roentgenological and sereal evidence and animal inoculation, the latter was not done. Those interested in the case were of the unanimous opinion that the gas bacillus infection did not extend beyond the line of oxygen infused into the tissues and that there was no evidence of tissue injury due to its presence.

Case No. 4, Mr. E. B.:

Age 35, healthy, injured in automobile accident. Placed in truck and carried 20 miles to hospital. Studied and X-rayed, diagnosed

as having left shoulder dislocated and a compound fracture of humerus at about middle of bone. No remarks were made of the presence of gas in tissue at this time. X-ray did not show injury of ribs. Patient was anesthetized and attempts were made to reduce the dislocation and fracture. After about one and one-half hours effort without success he was returned to his room and consultation obtained. The consultant arrived some three hours later and surveyed the situation. In his examination he was able to obtain crepitus on the soft tissues above the wound and in the axilla. At his request the patient was moved some 33 miles to the Baptist Hospital. The study here revealed a red inflammatory line encircling the shoulder with a tongue of inflammation extending to the middle of the clavicle. Crepitation was elicited in the soft tissues of the axilla and the upper arm while the tissues of the thorax were silent. Patient quite ill, temperature 101, pulse 145, red blood cells 3,260,000; white blood count 24 000 small lymphocytes 17, polys 75, transitionals 8, albumin ##. Sugar ### (he had received glucose intravenously) hyaline casts few and pus cells occasionally. He was given 1,000 cc. saline with 5 per cent glucose intravenously and 20 cc. perfrigens serum intramuscularly and a like amount intravenously. 7 cc. of digitalin was instilled into the vein, and sufficient morphine to rest him. That evening 360 cc. of oxygen was infused into the tissues proximal to the line of inflammation about the shoulder. The patient was entirely conscious and complained only of the insertion of the needle. The following morning patient was much relieved, temperature and pulse were on the normal lines where they remained for several days even subsequent to the operation necessary to reduction of fracture and dislocation. The swelling subsided, the tissues took on a healthy look and infection remained out of the wound. X-ray of the shoulder 48 hours after infusion of oxygen showed the gas as large bubbles and streaks along the muscle planes and an absence of spread of the original gas. Further clinical and roentgenological study showed the gas infection to have been completely checked in loco.

Case No. 5, Mr. W. R. B.:

A healthy young man of some 20 years, received a puncture wound of the wrist. The nail passed through the soft tissue and bones at the carpa-meta carpal joint of thumb and index finger. He went to the clinic where he received local treatment and tetanus antitoxin. He was sent to the hospital some 6 hours later, where a thorough study showed crepitation and roentgenologic evidence of small gas bubbles in the tissue entirely like that of gas bacillus infection. After a few hours another X-ray was taken; this showed a definite increase of the gas in the tissue, evidently a very rapid fulminating infection. At ten that evening patient was taken to the operating room where adequate drainage was established. At this time he received 50 cc. of perfrigens serum into the soft tissue of the hand and arm. 50 cc. was given intravenously after returning patient to room. In addition to the drainage and serum 500 cc. of oxygen was infused into the soft tissues of the hand, wrist, forearm and a collar like infusion above the elbow. The arm was ballooned up by the oxygen fully 30 per cent. In one instance the needle was inserted under the distal portion of the palmar fascia and oxygen driven in till it bubbled from the wound 2½ inches above the wrist.

Patients temperature was 100.4, pulse 100, leucocytes 10,650, small lymphocytes 31, large lymphocytes 1, polys 66, eosinophiles 2. Urine negative. The anaesthetist remarked that patient seemed more toxic than any he had inducted for a long time. The patient spent a rather uncomfortable night, but the following morning found him much more cheerful less toxic, with pulse and temperature near the normal lines. There was marked crepitus in all the soft tissues while the axilla contained some definite bubbles. This was believed to be due to the Oxygen and left alone. The following morning showed definite improvement. There was no spread of the infection beyond the site at the time of operation. Some of the oxygen was massaged from the axilla down to the elbow where it escaped through the wound. The surgeon remarked about the healthy appearance of the musculature bulging into the different wounds and the absence of pyogenic infection. From this on the patient made favorable and rapid progress. The gas infection though carrying evidence of a most fulminating type was promptly and completely eliminated without

further progress. The tissues were in no way injured and it might not be imaginary to say they appeared more healthy than was anticipated.

Case No. 6, Mr. H. H.:

Came to the Little Rock General Hospital on November 15, 1930, suffering from a bullet wound passing through the anterior abdominal wall, the lower edge of the liver to the right of the gall-bladder, through the upper pole of the right kidney, sealed the vertebra and made its exit just at the level of the 3rd lumbar vertebra. The injury occurred about one hour previously. He was taken to the operating room and opened up. The bleeding points were ligated, the hole in the liver packed and anterior abdominal wall closed. The patient was in fairly good condition with temperature 101, pulse 120.

About five P. M. the following day the surgeon noticed some crepitation over the midline of the right rectus about 2 inches from the surgical incision. This patch of gas covered an area approximately 3 inches long and 1½ inches wide. The incision was sealed in the process of healing; at 8 P. M. ie, 24 hours after the operation 700 cc. of oxygen was infused into the tissues of the abdominal wall encircling the wound and surgical incision and extending over the left rectus muscle; skin clips were removed and a probe passed into the tissue area of right rectus, but not into the tissue infused with oxygen. 50 cc. of perfrigens serum was given intravenously with 1,000 cc. of physiological salt solution and 5 per cent dextrose. Digitalis and sedatives were given as indicated.

It was remarked at this time that an infusion of 700 to 800 cc. of oxygen into the abdominal cavity might not be a bad precaution, however with no indications of gas in the abdomen, it was not done. The following day found the patient about the same, temperature around 101, pulse pretty rapid 130. He received the rest of the 100 cc. of perfrigens serum. There was no evidence of spread of gas in right rectus muscle. Laboratory report confirmed the clinical diagnosis. During the afternoon of the third day patient developed distension and tymponitis, temperature dropped to about 100 while pulse went to 140. He lasted throughout the night and until about 10 A. M. the following morning.

The resident was present when the patient died and while carrying out artificial respiration, the abdominal wound broke open allowing a gush of air to escape from the belly. A postmortem was secured and developed the following relative to the gas bacillus infection and oxygen infusion. There was considerable residual oxygen in the right rectus muscle. The muscle was healthy and carried almost no evidence of the previous gas formation by the perfrigens bacillus. The space between the dome of the liver and the under surface of the diaphragm carried a fibrinous coagulum, studded with different sized gas bubbles. When this coagulum was torn loose it left the surface of the liver and diaphragm smooth, but slightly congested. Diffuse peritonitis was present, but no pockets of gas were encountered. While there were several factors contributing to the death of this patient, it was evident that the perfrigens bacillus found its way into the abdominal cavity where it continued to grow and multiply, unhindered by free oxygen, but still accessible to the antitoxic properties of the perfrigens serum. That the focus demonstrated in the right rectus and infused with oxygen was not identifiable at postmortem.

Summary

You have had presented to you briefly six (6) cases diagnosed gas bacillus infection. I have very little comment to make on the clinical course of such cases since the introduction of the serum, as you are probably more familiar with such cases than I am. The prompt abatement of symptoms however has not been my experience.

(A). The infusion of oxygen into the tissues rests upon what seems to be a sound scientific fact, i. e. the perfrigens groups of organisms are obligate anaerobes and promptly die in the presence of free oxygen. Therefore the presence of free oxygen in the tissues would be incompatible to their growth.

(B). From my own experience and those associated with me in the above cases, nothing has developed that would indicate any deleterious effect on the tissues from the infused oxygen.

(C). Not one of these cases showed extension of infection beyond the barrier of oxygen.

(D). The orthodox procedures of free drainage and serum treatment are as yet obligatory. The supplementary infusion of oxy-

gen into the tissues seems to have contributed a decided factor in the arrest and elimination of the infection.

(E). Whether or not it contributes a factor to tissue metabolism and respiration will be determined by subsequent study.

(1). Welch and Nutall, Bull. Johns' Hopkins Hosp., 3, 1892, 81.

(2). Fraenkel, Cent., f. Bakt., Bd. 13, 1893, 13.

(3). Veillon and Zuber, Arch. de Med. Exper., 10, 1898, 517.

(4). Bull and Pritchett, Jour. Exper. Med., 26, 1917, 867.

TRAINING FOR MEDICAL RESERVE OFFICERS AT THE MAYO FOUNDATION, ROCHESTER, MINNESOTA, AND WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, ST. LOUIS, MISSOURI

Through the courtesy of the authorities at the Mayo Foundation, Rochester, Minnesota, and the Washington University School of Medicine, St. Louis, Missouri, arrangements have been made whereby there will be given a period of fourteen days inactive duty training for Medical Reserve Officers without expense to the government. The dates of this training are as follows:

Mayo Foundation, Rochester, Minnesota, October 18th-November 1st; Washington University School of Medicine, St. Louis, Missouri, November 8th-November 22nd.

These courses present to Medical Reserve Officers a two-fold advantage: (a) Medico-military instruction; (b) Refresher course in professional subjects. The courses are so arranged that a Reserve Officer can devote his morning hours in any of the clinics or other purely medical professional studies he desires. The afternoon and evening hours will be taken up entirely with medico-military subjects. The custom of taking annual study courses has become so general among medical men that argument about its advantage is unnecessary. Furthermore patriotic motives of a Reserve Officer in the interest of National Defense and his advancement in the military service have created a desire for periodic instruction in Medical Department Reserve matters. These two great medical centers have provided the ways and means whereby the two-fold purpose can be accomplished.

For the past two years inactive duty training to Medical Department Reserve Officers has been given during the fall months at the Mayo Foundation, Rochester, Minnesota, for a period of two weeks. The authorities of the Mayo Foundation provided the facilities, including instructors, offices, class rooms, etc., necessary to carry on the school. All expenses incurred, except the salaries of the members of the Regular Army were borne by the Foundation. The Washington University School of Medicine have offered the same facilities, including clinical instruction in the various branches of medical practice and the clinical material, laboratories, museums, libraries of the school and lecture rooms without charge. A group of faculty members have volunteered to give instruction and hold clinics during the period of training.

At our first inactive duty training camp at the Mayo Foundation most of the students were Fellows of the Mayo Foundation or otherwise connected with the Mayo Clinic. A few were physicians from other parts of the Corps Area, who profited by having the mornings free to devote to observation of the work at the clinic. The attendance at this school for the first year was thirty-three (33). The following fall, 1930, another two weeks period of training was provided with the same facilities as in the previous year by the Mayo Foundation. Fifty-one (51) Reserve Officers received instruction during this training period. The school was originally established because of the difficulty in granting leave to the Reserve Officers at the Mayo Clinic for camp training in July because of the fact that this was the rush season at the clinic. After conducting two of these camps the authorities at the Mayo Clinic summarized the advantages as follows:

a. A Reserve Officer in convenient periods of the year receives stimulating personal instruction along military lines.

b. It provides preparation for taking examination for the next higher grade.

c. It affords a Medical Officer the satisfaction of knowing he is better fitted for his present rank.

d. It provides for the combination of military training with a professional observation course at the medical center.

Great interest was shown in these two courses and many of those who attended emphasized the importance of such a course on

account of the dual purpose offered a busy doctor, namely, training for the duties required of a military surgeon and the opportunity for a refresher course in any specialty of medicine.

All applications for the course of training at the Mayo Foundation should be made to the Director of the Mayo Foundation through the Surgeon, Seventh Corps Area, and applications to take the course at Washington University School of Medicine should be sent to the Dean of Washington University School of Medicine through the Surgeon, Seventh Corps Area, Omaha, Nebraska.

PREVENTION AND CONTROL OF VENEREAL DISEASES

In discussing the important public health problem of venereal disease. Surgeon-General H. S. Cumming of the Public Health Service invites attention to the fact that during the fiscal year 1930, State health authorities reported to the Public Health Service 213,309 cases of syphilis and 155,875 cases of gonorrhea. The total of venereal infections thus reported exceeded the number of cases reported during the calendar year for any other single communicable disease, omniprevalent measles not excepted. While it may be assumed that the reporting for all notifiable diseases probably is far from complete, there is no reason to believe that cases of venereal disease are being reported any more completely than cases of other diseases. On the other hand, data obtained from prevalence-studies which have been made up to the present time appear to show that the incidence of syphilis and gonorrhea in the United States probably is much higher than that indicated by the State reports. Estimates worked out from the results of these surveys place the probable number of new infections for which treatment is sought during the course of a year at more than 1,000,000.

Realizing the serious nature and tremendous extent of the venereal disease problem in this country, the Service has continued its efforts to improve methods of treatment for syphilis and gonorrhea and to stimulate greater interest in the control of these infections. Special surveys have brought to light the true prevalence of syphilis in certain population groups in several States. Demonstration projects, financed almost entirely with funds obtained from outside philanthropic agencies and from State and local sources, have been carried out under Service guidance to show what may be accomplished in the control of syphilis through the effect of treatment applied to large numbers of infected individuals in a single locality at one time.

Coffee and doughnuts of bread lines should be replaced by thick vegetable soup and milk, writes the editor of Hygeia, Dr. Morris Fishbein. Although a human being can live on coffee and doughnuts for a long time, he will soon begin to show signs of the deficiency. Already, he says, reports are appearing in metropolitan centers of cases of pellagra and scurvy among the unemployed.

PLAN MEALS AROUND SALAD AND VEGETABLES TO PROVIDE VITAMINS

Every mother and housekeeper needs to know enough about vitamins to plan for the health of her family. Meals are generally planned about the meat, yet it would be an excellent idea to reverse the method and to plan the meal around the salad and vegetables, writes Stella Randolph in her article "Visualizing the Vitamin," in Hygeia. Thus there would be no danger of not filling the vitamin requirements of the body.

Blindness may be caused from a lack of vitamin A; lack of vitamin B may cause beriberi; without vitamin C scurvy may occur, and without vitamin D there is the possibility of rickets.

Vitamin A is found in butter, cream, egg yolk, liver, kidney and in the leafy vegetables. Vitamin B is in spinach, turnips, radishes, water cress, lettuce, raw cabbage, brussels sprouts. Vitamin C is in tomatoes, orange juice, celery, fresh peas and cabbage. The rickets-preventing vitamin D is in its greatest abundance in cod liver oil.

Adults as well as children need all of the vitamins, says Miss Randolph. What constitutes good food while we are young will serve well in later life.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial Clippings

THE TREATMENT OF PNEUMONIA

Forty years ago, in 1891, Osler wrote the following, in regard to the treatment of pneumonia: "Pneumonia is a self-limited disease, and runs its course uninfluenced in any way by medicine. It can neither be aborted nor cut short by any known means at our command. Even under the most unfavorable circumstances it will terminate abruptly and naturally without a dose of medicine having been administered." (1). He did, however, call attention to the value of venesection, measures for lowering the temperature and supporting the heart, and the general care of the patient in regard to diet, sleep, catharis, etc.

As the years have passed, little of value has been added, until comparatively recently, to our knowledge of the treatment of this condition. The older principle of a self-limited disease naturally cannot be overlooked even at the present time, but now we have not only specific forms of treatment, but new means of conserving the strength of the patient, neutralizing the toxin of the disease, and treating the complications. These methods are all well described by Dr. Campbell P. Howard of Montreal in a recent publication (2).

Of the measures to conserve the strength of the patient and relieve his symptoms little need be said in regard to rest, fresh air, diet, a liberal water intake and hydrotherapy. Howard considers alcohol practically valueless, if not actually harmful, as a cardiovascular stimulant, except in habitual users of alcohol. Strychnine he also omits, as it increases the tendency to nervous excitement and irritability. Digitalis, on the other hand, he considers a valuable drug in pneumonia, though he thinks it has been abused in the past. It is very easy to give the drug when there are no definite signs indicating its use and Howard would limit the exhibition of it to cases only where there is co-existing heart disease, or when auricular fibrillation or some other evidence of serious myocardial change makes its appearance. He is distinctly in agreement with the Bellevue Hospital Committee, who recently decided unanimously against the routine administration of digitalis to patients suffering from lobar pneumonia.

The use of oxygen to relieve cyanosis is a valuable procedure, although, unfortunately, only a few hospitals in this country have properly equipped oxygen chambers for pneumonia patients. The success of oxygen treatment depends upon three factors: first, getting as much gas into the alveoli as possible; secondly, starting the treatment early, before irreparable damage has been done because of anoxemia; and, thirdly, maintaining the administration until cyanosis disappears. When no special apparatus is available, an ordinary anesthetic mask may be employed. By the intelligent use of oxygen, Howard points out, cyanosis ought to diminish or disappear, the pulse improve, the rate of respiration lessen, and by decreasing the restlessness or delirium, the patient often notes marked subjective improvement.

Howard has more to say about specific measures by serum and vaccine in the treatment of this disease. The sera currently employed are the Rockefeller antipneumococcus horse serum, Kyes' domestic fowl serum. Huntoon's pneumococcus antibody solution, and Felton's concentrated serum. While it is impossible to note all the details in regard to each one of these methods of treatment, it should be observed that Howard's conservative views are, briefly, as follows:

The Rockefeller serum gives no change in the rate of resolution of the lung tissue already involved and does not prevent the development of complications such as empyema, pericarditis, etc. The effect on mortality, however, is usually striking, although some physicians have reported very minor results from its administration. Apparently, the degree of potency of the serum is one of the prime factors in treatment. As a final conclusion it would seem that one is justified in stating that the Rockefeller serum is capable of exerting a definite influence on the course of type 1 and type II pneumonia, when administered under proper conditions.

Kyes' serum is a polyvalent serum and therefore does away with the delay necessitated by typing the patient's sputum. It has been reasonably successful in the treatment of pneumonia and a number of patients with pneumococcus meningitis, a notoriously fatal type of pneumococcus infection, have been cured by its use.

Huntoon's serum seems also to yield very good clinical results, but the severe thermal reactions that follow its intravenous use militate against the general adoption of it by the medical profession.

Felton's serum has, perhaps, the best record of all and Howard is enthusiastic about the effects of its use in type I and type II pneumonias and, to a less extent, in type IV. He has found it of less value in type III, but he "unhesitatingly urges its use in every case of pneumonia without exception as to type, provided one sees the patient in the first three days of the disease."

There seems to be little evidence, according to Howard that vaccines or convalescent serum are of value in treating patients with pneumonia. Of the complications of the disease, empyema, as always, demands surgical intervention. There is no new treatment for meningitis, except, possibly, the use of Kyes' serum, as noted above.

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FAILURES OF TONSILLECTOMY

Those skilled surgeons, the ancient Hindus, one thousand years before Christ, advocated the removal of tonsils by seizing them with forceps and cutting them with semicircular knife. The extreme popularity of tonsillectomy, however, dates within the last twenty years, when the rate has accelerated to the point where one-third of all operations performed among the American urban population have been for the removal of tonsils and adenoids (1).

Several series of thousands of tonsillectomies have now been reported and analyzed to determine the precise effects of the operation upon the patient. In some of the series, the incidence of several infectious diseases has been reported slightly lowered following tonsillectomy. In most of the series, beneficial effects of tonsillectomy upon certain averages

of disease incidence are reported (2). The various authors, however, do not agree as to the diseases prevented or as to benefits obtained.

Cunningham (3) has recently reviewed the vast literature and added another series which includes more than 12,000 cases from the files of women students at the University of California. Their histories were analyzed to compare the incidence of illness in those with no tonsils, in those with normal tonsils, and in those with pathological tonsils. The groups with normal and with pathological tonsils differed insignificantly in the incidence of the following diseases: measles, mumps, chicken pox, whooping cough, scarlet fever, diphtheria, pneumonia, pleurisy, chronic colds, rheumatism and chorea. There was also no difference in the number of appendectomies, mastoidectomies and operations upon the cervical lymph nodes and nose. Among the young women without tonsils, there was more illness than in the group with tonsils. This is not due to the operation, of course, Cunningham says, but occurs because the child who is often ill ultimately has his tonsils removed. Those who are most ill are most tonsillectomized. A review of the literature on the effect of the condition of the tonsils on the general health, she says, reveals a great lack of accurate information as to the effects of tonsillectomy, which is surprising when one considers the number of operations performed. There is a growing tendency, says the California author, to question the value of tonsillectomy as a prophylaxis against infectious diseases, or in the prevention or cure of rheumatism, chorea and carditis.

If removal of the tonsils is not beneficial in these conditions, what is left?

No medical theory can be held sacred or unassailable. Each one must be strong enough to bear the impact of continual beating of the flood of scientific advance. Tonsillar infection has been the pillar of strength of the whole theory of focal infection, which has been called "America's greatest gift to medical science." Impeachment of the theory of the relationship of pathological tonsils to the symptoms of chronic disease would be an impeachment of the whole theory of focal infection. One would need simultaneously to deny the value of filling holes in decayed teeth, or if abstracting teeth with abscessed roots, or actually, of the fundamental principle of surgery, the release of pus. Obviously there are times when tonsillectomy is beneficial. It is equally probable that a number of needless operations have been performed.

The Journal of the American Medical Association, in commenting editorially (4) on the government report which indicated that tonsillectomy, although sometimes helpful, frequently failed to improve the condition of the patient, called attention to a report of Rhoads and Dick (5) that pieces of tonsillar tissue were left *in situ* in 73 per cent of 403 patients tonsillectomized under good conditions; and that these small tonsil tags contain more bacteria per gram than larger tonsils. If this be confirmed, all contemporary statistics will become confused and conclusions from many recent series will be questionable.

The statistics reported have dealt chiefly with well persons, in many instances with children attending school. When one considers a large number of chronically invalided individuals with and without tonsils, the results may be quite different. Fifty cases have recently been reported in the British Medical Journal (6) of patients who had suffered from rheumatism for a long period. All but one of these, according to the statement of relatives, improved in general health after tonsillectomy. There are many other reports of this kind.

Tonsils have been removed in the past in the presence of any unpleasant symptom of systemic disease on the theory that they might be connected with it. The tonsil for a long time held the position of a prisoner under lynch law, guilty unless his innocence could be demonstrated beyond a doubt. Or he was like the accused witch, who was thrown into the water because if she drowned her innocence could be established. These organs should revert to the position of the ordinary prosecuted member of society, innocent in the eyes of the law until conclusive evidence against him is presented. New criteria for the conviction of the pathological tonsil are sorely needed.

From the extensive opportunity for observation of tonsillectomized patients which the past two decades have offered, it becomes evident that wholesale and perhaps indiscriminate operations upon the tonsil of a large

part of the population have at least done no harm. The general health of the population has not been impaired by them.

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Abstract

OBLIGATIONS OF THE MEDICAL PROFESSION

In the President's address before the American Medical Association at the Eighty-second Annual Session, Philadelphia, June 9, 1931, E. Starr Judd, Rochester, Minn. (Journal A. M. A., June 13, 1931), stated that the medical profession can help society a great deal by utilizing every effort at its command to educate people along medical lines. The idea of medical education for the public is not a new one, but the importance of it is more fully realized now than it was in former years. Every physician can do his part in this work in his daily visits and contacts with his patients. If this personal contact with patients is not carried out in an interesting, enthusiastic and educational manner, the physician is not fulfilling his professional obligations. There are many ways in which information concerning medical facts may be given to the public that are certain to be helpful in establishing a more confident and intimate relationship between the public and the profession. Public health and other medical lectures sponsored by county medical societies should be one of the important obligations of the county society. These lectures may be abstracted and published in the daily press. Under the supervision of the secretary or other officer or committee of the medical society, all medical news at his command should be made available to the press. The press has shown itself willing and anxious to publish this information and to cooperate with the profession in every way. The radio as a means of disseminating medical news and information in which the public is interested, and about which it should know, is being employed extensively, and undoubtedly it will be used more. Properly regulated and controlled by medical societies and their officers, this plan of giving out medical facts is certain to lead to results of great value. Those who control the radio corporations are overwhelmed with applications for time on their programs to broadcast quack remedies and cures, and they are anxious to know what should be accepted and what should not. It is one of the obligations of the medical profession to give them this information. The consensus among members of the medical profession generally is that some sort of publicity should be supplied by which the public will be made to understand the nature, the purposes and the results of the efforts made by scientific medicine for prevention and control of disease. The profession of medicine is under obligation to protect the public from unsound programs as much as to see that it is informed on the proper principles. A committee on public relations composed of members who have made studies of these problems, and who appreciate the obligations of the profession to the public, is a valuable part of a State organization. The organization of all medical activities in each State, so that the public health association State medical association, and all other associations and auxiliaries are under the one head helps greatly to coordinate all medical activities. This scheme brings the medical profession as a whole into the leadership of all activities pertaining to medicine within the State. It is not only the privilege of the profession to assume this leadership, but it is also its solemn obligation to direct all medical activities. Society must be made to realize that organized medicine is perfectly able to control and operate its affairs without the help of the government or other outside organizations and that it can do so to the advantage of every one concerned. It is the obligation of the profession to continue studies to help to establish itself in its proper place in relation to the local, State and national government. All physicians must realize that an organization that is responsible for the health

and lives of so many individuals each year and that is economically responsible for the expenditure of so much time, energy and money has a large responsibility and obligation.

Personal and News Items

Dr. E. W. Blackburn of Ozark was a recent visitor in Little Rock.

Dr. O. M. Bourland of Van Buren has returned from a three months vacation spent in Corpus Christi, Texas.

The Howard-Pike Counties Medical Society reported the election of Dr. W. M. Gibson, Nashville, President and Dr. J. T. Holcombe, Mineral Springs, Secretary.

The White County Medical Society met in Judsonia, June 4. A business session was held, followed by a report of the delegate to the State society meeting. Dr. S. J. Allbright of Searcy read a paper on myocarditis.

Every physician wishing to prescribe or dispense narcotics must register with the collector of internal revenue and pay the federal tax of $1.00 on or before July 1 or lose the permit which he now holds.

Clinical Staff Societies of St. Edward's, St. John's and Sparks Memorial Hospitals, Fort Smith, held an interesting all-day session, May 19. Twenty-three speakers were on the program and approximately one hundred physicians were in attendance. The next meeting will be held in September.

The regular monthly meeting of Desha County Medical Society was held in McGehee, May 19. All members were present but three. Dr. J. C. Miller, County Health Officer, brought before the Society the question of a free tonsil clinic, to be held in McGehee. After a thorough discussion of the subject, it was left to a vote, and was unanimously defeated.

A large crowd of citizens of Little Rock, as well as friends and relatives of students of the school from other parts of the State, attended the graduation exercises of the University of Arkansas, School of Medicine, June 2, at the Little Rock High School auditorium.

Thirty-two graduates of the school were awarded degrees, while 18 bachelor of science degrees in medicine were presented to members of the undergraduate classes. They were presented by Dr. Frank Vinsonhaler, dean.

Receiving their degrees in medicine were: Paul Garrett Autrey, Philip Arnold Bleakney, Henry Borow, Thomas Duel Brown, Edgar Jesse Easley, Isaac Cooper East, Edward Everett Estes, Vernon Alfred Gotcher, Marshall Harris, Lyle Leland Massell, James McDonald Hayes, Julius Hopwood Hellums, Charles Reid Henry, Peter William Hess, Garret Jackson, Jr., Leon Earl King, Julius H. Kopp, Thomas William McDaniel, Jr., Augustus Joseph Pauli, Ralph Perry, Allyn Richard Power, Waldo Atwood Regnier, Robert Kenneth Setzler, Wilbur Logan Slaughter, John Andrew Thompson, Howard Butler Throgmorton, James Milton Walls, John Thomas Walsh, Waddy Thompson Wilkinson, Jr., Carl Ray Williams, William Henry Woern and Charles Henry Wyatt.

Certificates were presented to 33 nurses of various hospitals of the city who rendered services during the year at the clinic.

THE AMERICAN COLLEGE OF PHYSICIANS

Will meet in San Francisco, 1932

The American College of Physicians will hold its Sixteenth Annual Clinical Session at San Francisco with headquarters at the Palace Hotel, April 4-8, 1932. Following the Clinical Session, a large percentage of the attendants will proceed to Los Angeles where a program principally of entertainment will be furnished April 9, 10 and 11.

Announcement of the dates is made particularly with a view not only of appraising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1932 meetings.

Dr. S. Marx White, of Minneapolis, is President of the American College of Physicians, and will arrange the Program of General Sessions. Dr. William J. Kerr, Professor of Medicine at the University of California Medical School, San Francisco, is General Chairman of local arrangements, and will be in charge of the Program of Clinics. Dr. Francis M. Pottenger, of Monrovia, is President-Elect of the College, and will be in charge of the arrangements at Los Angeles. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forthcoming Session.

Auxiliary Notes

The Woman's Auxiliary to Faulkner County Medical Society met at the home of Mrs. G. S. Brown, May 21. After the business session, Mrs. I. N. McCollum gave an interesting paper on "The Successful Sons of Doctors." At the social hour, the hostess served ice cream and cake.

Mrs. W. F. Smith and Mrs. Anderson Watkins entertained the Woman's Auxiliary to the Pulaski County Medical Society with a delightful luncheon at Mirror Brook. The business routine was carried on between the courses of the luncheon, at the beginning of which Mrs. A. R. Stover gave the invocation.

A letter was read from Mrs. Ed Salyers, President of the Pulaski County Education of Women's Home Demonstration Clubs, which extended an invitation to the Auxiliary members to attend the County Federation summer meeting to be held June 4, at the Old Mill swimming pool on the upper Hot Springs highway. An interesting report of the last City Federation luncheon was given by Mrs. A. R. Stover.

Mrs. K. W. Cosgrove gave a splendid report of the State Auxiliary meeting at Texarkana and Mrs. R. C. Kory reminded the auxiliary of the box supper and lawn party to be held at the home of Dr. and Mrs. W. L. Sadler, May 29, at 7 p. m.

Mrs. Anderson Watkins, retiring president, thanked the officers, committees and the auxiliary as a whole for the splendid co-operation given her during the past year. She then presented the incoming president, Mrs. D. A. Rhinehart, who took the chair, partially outlined the coming year's work and announced the chairmen of committees, who in turn discussed their plans. Mrs. M. J. Kilbury, entertainment chairman, disclosed plans for the State meeting to be held in Little Rock next spring. The first history of the auxiliary covering the past six years, prepared by Mrs. C. C. Reed, historian, and Mrs. S. P. Junkin, created much favorable comment.

THE FIRST COUNCILOR DISTRICT AND NORTHEAST ARKANSAS MEDICAL SOCIETY

(Reported by W. M. Majors, Sec.)

The First Councilor District and Northeast Arkansas Medical Society held its spring meeting at Paragould, May 13th, where the Society was entertained by the Greene County Medical Society.

The meeting was convened at 10 A. M. by the President, Dr. J. H. Lamb, Paragould, in the Banquet Room, Vandervoort Hotel.

Approximately one hundred doctors and their wives, together with many other guest, were in attendance from the neighboring towns.

The program was as follows:

Morning Session

Invocation—Rev. Jas. W. McNutt, Paragould.

Address of Welcome on behalf of Paragould and the Greene County Medical Society—W. M. Majors, Paragould.

Response to Address of Welcome—L. H. McDaniel, Tyronza.

"Bronchiectasis"—H. A. Stroud, Jonesboro.

Discussed by P. L. Tipton, Blytheville, H. A. McCarroll, Walnut Ridge, and H. A. Pratt, Jonesboro.

"Intestinal Protozoa In Man"—John L. Jelks, Memphis, Tenn.

Discussed by A. G. Henderson, Jonesboro, H. A. Pratt, Jonesboro, B. F. Hardin, Memphis, and J. C. Land, Walnut Ridge.

Afternoon Session

"Chronic Mucous Colitis"—S. F. Hoge, Little Rock.

Discussed by B. F. Hardin, Memphis, Tenn.

"The Diagnosis and Management of Stones in the Kidney"—(With lantern slides and motion pictures)—Thos. D. Moore, Memphis, Tenn.

Wm. J. Sheddan of Osceola was on the program for a paper intitled "Tularemia," but due to the late hour it was voted to postpone the reading of this paper until the fall meeting.

Dr. J. H. Lamb omitted his President's Address, which was voted to be submitted for publication in the State Journal.

F. D. Smith of Blytheville was elected Secretary and Treasurer to succeed W. M. Majors who had served that office five years.

Jonesboro was selected for place of meeting for the fall meeting, 1931.

Officers: J. H. Lamb, Paragould, President; T. F. Hudson, Luxora, Vice-President; F. D. Smith, Blytheville, Secretary-Treasurer; W. M. Majors, Paragould, Councilor.

Obituary

BUTLER, JOHN L.—Dr. J. L. Butler of Sheridan died June 13, 1931. Aged 66. He had practiced medicine in Sheridan for forty years, and was a former member of the Arkansas House of Representatives, having served three terms.

Surviving are his widow, one son, Dr. Runyan Butler, of Clovis, N. M., and three daughters, Mrs. Ruth Nall and Mrs. Lillian Roberts of McNeil and Miss Venetia Butler of Los Angeles, Calif.

County Societies

YELL COUNTY

(Reported by E. J. Haster, Sec.)

The Yell County Medical Society met in regular session at Plainview, May 4, 1931. Present: Hunt, Pool, Lee, Montgomery, Earl Montgomery, Thos. Montgomery, Millard, Ballenger, Miller and Haster. Visitors were: Montgomery of Atkins; Webb, Gardner, Erving, Scarlett, L. M. Smith and W. R. Smith of Russellville, and Matthews of Morrilton.

Program rendered as follows:

"Nervous Diseases of the Heart" (written by Dr. Lee Montgomery in 1904) read by L. M. Smith of Russellville.

"Cholecystectomy" and case report by Dr. Matthews of Morrilton.

"Case Report on Banti's Disease," by Dr. Millard of Dardanelle.

It was voted that the paper written by Dr. Montgomery be submitted to the Journal for publication.

The next meeting will be held at Ola, in June.

Book Reviews

Dietetics and Nutrition.—By Maude A. Perry, B. S., Formerly Director of Dietetics at the Michael Reese Hospital, Chicago, Illinois, and the Montreal General Hospital, Montreal, Canada. Published by The C. V. Mosby Company. Price $2.50. St. Louis.

It is the author's aim in presenting this book to give the present scientific and technical material in plain and simple language to meet the needs of schools and to be of valuable aid to nurses and physicians.

It is unnecessary to say that the need of an adequate diet for sick people at home or in an institution is imperative.

Clinical Features of Heart Disease.—An Interpretation of the Mechanics of Diagnosis for Practitioners. By Leroy Crummer, M. D., Emeritus Professor of Medicine, University of Nebraska. Introduction by Emanuel Libman, M. D., Professor of Clinical Medicine, Columbia University. Second Edition, Revised and Enlarged. Published by Paul B. Hoeber, Inc., New York. Price, $4.00.

This book is a timely one that will shape and substantiate two valuable ideas: First, a diagnosis of valvular heart disease does not imply imminent or sudden death. Second, decompensation is a diagnosis which should be made early, and only a minor portion of this diagnosis is made from physical signs.

LAST WORDS

Last words of dying persons are like the mutterings in a delirium. Why then are they so treasured? asks Dr. J. Shelton Horsley in an article in Hygeia. The melodramatic picture of relatives hovering over a deathbed is based on the wrong conception. Last words are of no value when they come from a mind benumbed by approaching death. It is better to remember the words spoken while the person was in a healthy mental and physical state.

Priests Roman and priests Protestant
From the agony of travail, by nature exempt,
Have asseverated that birth control is sinful
And that woman, any alleviation must not attempt.

They, to their fundamentals so blindly adhering
That anaesthesia, humanity's greatest boon—
In the throes of travail must be eschewed,
The light of science snuffed, and woman left to her doom.

If science contradicts their preconceived notions
And they and Gregory are one—that "ignorance is the mother of devotion,"
Why not, by all means, upon it, restrictions impose
And exercising their inherent right, banish thought and enjoy stagnant repose.

So, if you would not excommunicate be,
Bare the willing back—join the "flagellantes"
Endure to the utmost the scourge;
And upon all scientific research, learn to look askance.

—O. M. Bourland, Van Buren, Ark.

Members of the Arkansas Medical Society are invited to attend the Third Pan-American Medical Congress will be held in the city of Mexico, July 26th to 31st, 1931. This congress is being held under the auspices of the Department of Public Health of the Mexican Government. The U. S. Department has decided that our Government will participate in this Third Pan-American Medical Congress and has designated several American physicians as delegates on the part of the United States to this congress.

CATARACTS

The successful removal of many cataracts each year in the United States is enabling older persons to regain their eyesight. A host of these afflicted persons had believed that they were too old for an operation or that cataracts could not be removed, states Dr. Louis Lehrfeld, author of an article on cataracts in Hygeia. The operation for removal of cataracts is comparatively simple and may be performed upon any person despite his age.

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Little Rock
President, Arkansas Medical Society, 1931-1932

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Original Articles

THE PRESENT STATUS OF THE RHEUMATISM PROBLEM*

OLIVER C. MELSON, M. D., F. A. C. P.
Little Rock

The subject of rheumatism is centuries old, but because new impetus has been given to its investigation and treatment under the name of arthritis, a brief summary of the progress to date may be stimulating. It is not my purpose to include in this paper any discussion of special types, such as traumatic, tuberculous or gonorrheal arthritis, but to speak only of the large group to which the term rheumatism has been applied. Also, I shall omit acute rheumatic fever from the discussion.

One of the first and most important signs of renewed interest has been an awakened consciousness on the part of both profession and laity of the economic importance of arthritis. Since 1928 there has been active in this country a group of medical men known as the American Committee for the Control of Rheumatism, which has been co-operating with like committees of foreign countries in an effort to solve the rheumatism problem. Through their efforts many medical centers have established clinics for the intensive study and treatment of arthritis. It is anticipated that more conclusions of primary worth will be forthcoming from these institutions.

Just what the morbidity or invalidism from arthritis is in this country has not been accurately estimated. However, it is safe to assume that it is one of the most, if not actually the most, disabling afflictions with which we must contend. That the disease has reached its present status of importance is partly due to apathy on the part of the medical profession; a seeming indifference induced by two main factors. The first is because of the difficulty of diagnosis and refractivity to treatment. The second is the pessimistic attitude toward its curability. In consequence, patients have applied for help mainly after deformity has occurred, and they have been shunted on to the orthopedist who has succeeded admirably in their correction, and further, has contributed no little to the present day conception of arthritis. In support of this statement I quote from the report of the orthopedic section of the Mayo Clinic for 1930 which cared for two hundred four cases of arthritis, which figure is only exceeded in that department by the number of fresh fractures (two hundred forty) and of bone tumors (two hundred six).

In 1909 Nichols and Richardson furnished a description of the pathological processes involved in arthritis which is classic in the English language. To these workers goes the credit for our present classification of arthritis which twenty years after its formulation has been accepted as the working basis of the Rheumatism Committee. Two great groups of arthritis are recognized, the atrophic or proliferative and the hypertrophic or degenerative, the terms describing morphological changes occurring in the joints. The infectious type of arthritis is frequently mentioned by writers on the subject as a distinct entity. Nichols and Richardson however, included it in the atrophic group. While this classification is based upon pathologic data, I shall not burden you with the detail. Those interested may find several articles dealing with the subject. I do wish, however, to present briefly the clinical features of the two groups so that we may more closely segregate our cases. It is understood, of course, that this classification is not all inclusive, nor is it necessarily permanent but with our present knowledge it is the best that has been offered. Obviously, too, there may be a mixture of types.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

Atrophic arthritis is essentially a disease of young individuals. The onset is insidious. It may manifest itself as a fusiform swelling of one of the small joints, usually the middle, of the finger, associated with some stiffness, or there may be evidences of active inflammation, heat, redness and pain. Lateral pressure over the joint will elicit tenderness and this may even determine the presence of an arthritis in an unsuspected joint. Other features of this type should be borne in mind. There is a distinctly hereditary tendency, women are more commonly affected than men, and the joints are prone to ankylose. One may say that the finished product of a chronic atrophic arthritis is arthritis deformans.

In contrast hypertrophic arthritis is a disease of later life. It, too, is more frequent in women occurring during or after the menopause. The distal joint of the fingers may be first involved, but by the time the patient first consults the physician one or more of the larger joints are affected. The weight bearing joints, knee, hip and spine are most frequently diseased. Stiffness after sitting is an early symptom, although pain on movement may be a prominent complaint. Tenderness on pressure and some swelling may also occur. Effusion is not as common in the hypertrophic type as in the atrophic. In this type of arthritis, the roentgen ray is of inestimable value in diagnosis, as by its use the characteristic lipping of the joint surfaces may be observed. Palpation may reveal the crepitus so distinctive of this type of the disease and indeed, the patient may have the attention drawn to the joint by cracking or grating noise. Joints in this category are less liable to ankylosis although not infrequently, there is fusion of the vertebrae.

Researches upon the etiological factors involved in the two groups have thrown much new light upon the subject. Perhaps the oldest and best known theory is that of focal infection. Since its exposition by Billings this theory has received wide credence throughout the profession, in fact many individual practitioners have believed it the only cause of arthritis and when the foci had been eradicated there was nothing more to be accomplished for the patient. In our present day conception focal infections chiefly contribute to the atrophic arthritis. Efforts are being made to determine the specific organism producing the arthritic changes. A few years ago Small discovered what he believed to be such a specific agent, the streptococcus cardioarthritidis. Other investigators have reported the recovery in several cases of organisms answering Small's description. Cecil is of the opinion that the streptococcus viridans is the most common offender. Rosenow also believes some strain of the streptococcus to be responsible.

Concomitantly other workers have been investigating etiologic factors along other lines. Hereditary and constitutional tendencies have received attention. Careful anamnesis has revealed definite hereditary connection in the atrophic type. Also, in this type the constitutional make-up of an individual may prognosticate future joint disease. Such characteristics as low temperature, cold extremities, mottled skin, low systolic blood pressure, secondary anemia, low basal metabolic rate, changes in the tone of the colon as shown by diminution in the haustral markings by X-ray may be forerunners of an atrophic arthritis. Blood chemistry studies have apparently disproved the uric acid theory of hypertrophic arthritis and at the same time promoted the theory that a delayed sugar excretion is present in arthritis of both groups. Experimental pathological studies have demonstrated that the bony changes are due to reduction in the local circulation either through nervous or vascular influences. The synovial fluid and observation of the surface capillaries have contributed to our knowledge of the subject. A few investigators have found protozoan diseases of the intestine such as infections of amoeba, chilomastix, trichomonads and lamblia responsible for the symptoms of arthritis.

Naturally with the etiology becoming so complex, treatment has kept pace. Recognition of the possible etiological factors has enabled the profession to increase its therapeutic armamentarium. In those cases with a rheumatic diathesis, it may be possible to prevent the bony changes by correction of faulty living habits, poor posture, and the like, through the medium of systemic exercises and a diet high in vitamins. After the joints have become diseased, the treatment must be along other lines as well. Too much emphasis cannot be placed upon the necessity for a painstaking and thorough clinical investigation of the individual patient. Upon this rests the accuracy of the diagnosis and the efficacy

of the treatment. Suspicious foci such as diseased tonsils, abscessed teeth, prostatic infections, accessory sinus infections, gall bladder infections should be removed, presupposing, of course, that the patient is not too debilitated to stand the procedures involved. If protozoan infections of the bowel are discovered and considered responsible they should receive treatment. In the loss of bowel tone which occurs in some cases colonic irrigations have been used with varying success. The cases apparently respond more noticeably to diet. Because of the slow carbohydrate metabolism, the sugars and starches are reduced while the protein and fat are increased. It is remarkable what relief may be obtained through diet alone.

Vaccines have enjoyed a protracted vogue. They have been used for their non-specific protein reaction such as the typhoid vaccine, and also for the development of specific immunity. Cultures have been obtained from various sources, the blood stream, lymph nodes draining the infected area, joints and foci being most common. Small has developed a serum with antibodies against this streptococcus. At present its therapeutic possibilities are in the developmental stage. Sterile milk has also been used widely for its protein reaction.

As a result of the pathological studies of Pemberton and others upon the circulatory changes in arthritis, local treatment under the general term of physiotherapy has many variations. Its chief value and purpose is in increasing the local circulation through the application of heat. Hot baths, steam, mud baths and hot packs are the chief methods for applying moist heat. Dry heat may be applied through the medium of electric lamps and heaters, hot bricks and the like. Baking is a familiar method of applying dry heat and often affords marked relief from pain. Massage, exercise and rest all come under the category of physiotherapy. While their effect is not uniform there are indications which demand their employ.

The drugs employed in the treatment of arthritis are legion. With our increasing knowledge their therapeutic virtues are becoming more definitely known and the list is decreasing. Analgesics such as salicylates, cinchophen and acetanilid have probably had the most widespread use of any single group. Not only have they been popularized by the profession, but they have almost become household remedies with the laity. Cinchophen has less popularity than the others and rightly so because of its seeming greater toxicity. Iodides have been used for their nonspecific action since time immemorial. Clendenning states that they have more value than any single drug in the treatment of rheumatism. Such tonics as iron and strychnine have undoubted value. Orthoiodoxybenzoic acid was brought to the profession by Young and Youmans as a promising anti-arthritic. Various groups of cases have been reported in the literature leaving the impression that the drug has not raised itself beyond mediocrity.

In an effort to perhaps permanently increase the local heat of a joint, Hench, Rowntree and others are experimenting in the use of an operative procedure upon the lumbar and cervicothoracic sympathetic ganglia. This has been of value in cases of Raynaud's disease. They have formulated some rules governing the choice of patients as follows:

1. The arthritis should be mainly periarticular with few, if any, bony alterations (destruction or hypertrophy) except atrophy.

2. The patients should preferably demonstrate alterations in vasomotor tonus shown objectively by cold, clammy hands and feet and reduction of blood pressure and subjectively by intermittent numbness and tingling.

3. The vasomotor changes must be capable of correction under the influence of release from control of the sympathetic system. The possibility of such correction can be demonstrated by the vasomotor index, a definite increase in the temperature of the extremities greater than the increase in the temperature of the mouth after the injection of typhoid vaccine intravenously.

4. The patient should be rather young, preferably less than the age of thirty-five and not older than the age of forty-five.

5. The arthritis should be progressive and the main disability should be confined to the extremities, particularly the hands and the feet.

6. A reasonable period, probably six months, of intensive, not haphazard, treatment by the more established, less radical procedures should have been allowed.

A patient may be looking over some old copies of the Ladies Home Journal and see a reporter's description of the operation and come rushing to you to see if the operation would benefit her. These six rules may help you to decide.

In conclusion there are a few points which I wish to emphasize. First of all, arthritis is strictly a medical problem. Unfortunately through the lethargy of the medical division, the investigation and treatment of the disease fell into the hands of specialists in nose and throat, genito-urinary or dental work. Orthopedists have performed noble service in the correction and prevention of deformities. Yet in the final analysis, the internist should shoulder the responsibility of diagnosis and direct the care of the arthritic patient. From the foregoing it is easily comprehended that no single line of treatment will suffice in all cases. "What is one man's meat may be another man's poison." For this reason it is necessary to follow through each possible clue to a logical conclusion. Finally, the opinion is growing that rheumatism especially in the severer deforming types is a preventable disease. It is hoped that the combination of social and medical forces will be overwhelmingly victorious in the future engagements with this disease. To accomplish this, however, a broad point of view and painstaking labor must be the ammunition; bitter disappointment in treatment may cause temporary retreat; but with all the agencies at work toward the same goal there can be only a successful campaign. Let us not dismiss the patient who consults us on account of a painful or stiff finger with the advice "It's a touch of rheumatism; take a few aspirins and it will probably disappear."

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

OUR NEW PRESIDENT

In Dr. Darmon A. Rhinehart, 56th President of the Arkansas Medical Society, it may be said, in a whist term, that "honors are easy." If our new president has been honored by the Society; the Society is honored by having an executive of such learning, reputation, and achievements as are his. He still is a young man (as age goes these days), being still on the sunny side of forty-five and in view of his scientific achievements since his graduation only 18 years ago, a brilliant future awaits him.

Dr. Rhinehart was born in Pulaski County, Indiana, on June 5, 1887, the son of Wesley A. and Sarah C. Rhinehart. Educated in the public schools of his native State he graduated from Plymouth High School in 1906. He entered Indiana University in 1906, graduating with his doctor's degree from the School of Medicine in 1913. But, in the meantime, he had earned, with distinction, his Bachelor of Arts degree from the college of Liberal Arts in 1910, and his Master of Arts from the Graduate School in 1912.

After receiving his degree in medicine in 1913 he served an internship at the Indianapolis City Hospital from May until October of that year. He then returned to his Alma Mater as an instructor in the Department of Anatomy for the school year 1913-1914.

In the fall of 1914, Dr. Rhinehart came to Little Rock as Professor of Anatomy in the Arkansas University, School of Medicine, serving in that capacity until 1919, resigning to engage in private practice—but while no longer a full-time teacher, he has served as Professor of Applied Anatomy and as Professor of Roentgenology from 1920 to date.

In his private practice, Dr. Rhinehart became a member of the firm of Watkins, Shipp, Bond and Rhinehart and was in charge of the X-ray and Clinical Laboratories until 1923, since which time he has been associated with his brother.

Besides his regular practice, he is the roentgenologist in four local hospitals, St. Vincent's, Baptist State, Missouri Pacific, and the Arkansas Children's Hospital.

It is apparent that he is a busy man, but he has found time to serve as President and also Secretary of the Pulaski County

Medical Society of which he is a most faithful member. He has also found time to write many articles for Medical Journals and to write a book, Roentgenographic Technique, published in 1930 and which has been highly praised by scientific men.

Dr. Rhinehart is a firm believer in organizations, for besides being a member of his county and State Medical Societies he is a member of the American Medical Association, Southern Medical Association, American Association of Anatomists, Radiological Society of North American, and a member of Phi Beta Pi, a national medical fraternity, also Sigma Xi a national scientific fraternity. And in addition to these scientific organizations he is a Scottish Rite Mason and a Shriner.

Dr. Rhinehart was married to Miss Hazel Van Buskirk, daughter of Judge and Mrs. Thomas Van Buskirk, at Bloomfield, Indiana, on September 1, 1914. They have two children, Frances Bayles, aged 13, and William Jackson, aged 11.

With so able a president and so assiduous a worker, the Arkansas Medical Society should rise to even greater heights in numbers and influence.

THE PRESIDENT'S ADDRESS

The address of the retiring president, Dr. E. E. Barlow of Dermott, at the annual meeting of the Arkansas Medical Society on April 21, was largely devoted to the unselfish sacrifices of the family doctor as exemplified in the disastrous drouth of last year. It is not necessary to remind our readers of the suffering throughout the State.

Here the activities of the family physician "Shone like good deeds in a wicked world." Not only, in many cases, did the doctor give his services without hope of payment but had to supply the medicine and food, sometimes stripping his own stock of provisions to feed the hungry. This is the real type of hero.

Paraphrasing Goldsmith's "Deserted Village" to his description of the village preacher, it may be said of him

"But in his duty prompt at every call
He watched, he fed, tended and cared for all."

In stressing this unselfish attitude of the profession at large and in his plea for harmony and true fellowship among the practitioners, instead of jealousies and rivalries, Dr. Barlow made a most admirable and timely address.

In closing, he also paid a tribute to the members of the Society who gave their time and service to block all efforts to repeal or modify the Basic Science Law, which is a thorn in the side of the non-medical practitioners.

His address to the General Session and to the House of Delegates will be found on pages 25 and 41 in this issue.

Personal and News Items

The annual picnic of the Pulaski County Medical Society was held at the Shrine Country Club, June 24, 1931.

Dr. J. W. Fleming, Jr., Smackover, has moved to Gladewater, Texas.

We regret to announce the death of Mrs. Kitchens, wife of Dr. C. E. Kitchens of DeQueen.

We regret to announce the death of Mrs. Wood, wife of Dr. Thos. J. Wood of Evening Shade, July 9, 1931.

Dr. Dewell Gann, Jr., Little Rock, announces the removal of his office from the Boyle Building to the Gann Building, 215 East Sixth Street.

Dr. Frank Young of Gering, Nebraska, visited friends in Little Rock and Springdale, on his return from the Philadelphia meeting of the American Medical Association.

A joint meeting of the Garland and Union County Medical Societies was held in El Dorado, July 7, 1931. Appearing on the program were Dr. D. A. Rhinehart of Little Rock, President of the Arkansas Medical Society, and Drs. H. King Wade, F. S. Tarleton, E. A. Purdum and A. H. Tribble of Hot Springs.

PROCEEDINGS

OF THE

FIFTY-SIXTH ANNUAL SESSION

OF THE

Arkansas Medical Society

Texarkana, April 21, 22, 23, 1931

HOUSE OF DELEGATES

First Day

Tuesday Morning, April 21

The House of Delegates convened in the convention hall of the Grim Hotel, and was called to order at 9:30 a. m., by the President, Dr. E. E. Barlow.

The Secretary: If there is no objection, the signed attendance cards of the delegates will take the place of the roll call. They show a quorum present.

The President: On the Credentials Committee I will appoint W. M. Majors, H. T. Smith and Will H. Mock.

On motion, duly seconded and carried, the minutes of the Fifty-fifth Annual Meeting as published in the July, 1930, issue of the Journal, were approved as printed.

The Credentials Committee made its report as follows:

The Committee on Credentials report that they have examined the credentials of all the delegates who have so far registered and find that their papers are in good form and correct.

W. M. MAJORS,
H. T. SMITH,
WILL H. MOCK.

There being no objection, the report stands as read.

The President: I will appoint on the Reference Committee, J. A. Foltz of Fort Smith, W. A. Snodgrass of Little Rock and J. O. Rush of Forrest City.

Will H. Mock, First Vice-President: It is my pleasure to introduce our President, who will now deliver his address to the House of Delegates, which will be referred to the Reference Committee.

To the House of Delegates of the Arkansas Medical Society:

At the conclusion of the great drought which most sections of our State have recently experienced, and the consequent bank failures with severe financial depression which resulted therefrom, want, hunger and deprivation stalked through our land to a degree hitherto probably unknown since the days of reconstruction.

Answering the call of humanity, our ever generous citizenship provided various forms of financial assistance to aid the needy; the Red Cross supplied food and clothing and medicines; local moneys were contributed through the inspiration of Will Rogers and others, to give employment to the unemployed; the United Drug Company (The Rexall people) filled prescriptions at all of their drug stores from February 15th to March 15th for those unable to pay; community chests did much to alleviate suffering; layettes in large numbers were sent to us by charitable citizens of South Dakota, and were distributed through the State Health Officer; government loans for food, feed, seed and fertilizer finally were made available, but no form of provision was made to help those who gave in many instances practically all of their time to assuage the sufferings of humanity—the Family Doctor. Their sacrifices which involved in many instances even the lack of necessities of life for their families and themselves, their devotion to their fellowmen, were worthy of the best traditions of our profession.

We can do no less therefore, than to take official cognizance of the manner in which the profession responded to the appeal of humanity in this dark hour of our life.

To these unnamed and unnumbered heroes of peace time, we extend our felicitations and our heart's best gratitude, in the name of the medical profession of our State.

While all of our committees have given generously of their time and talent I would like especially to call attention to the efficient work of the Legislative Committee. The irregular practitioners of the healing art, alarmed at the success of the Basic Science Law, enacted two years ago, and realizing that the more familiar that our people became with its wholesome effects the more difficult would it be to destroy it, made repeated efforts either to amend it so as to destroy its usefulness, or to repeal it out right.

It is difficult for me to refrain from mentioning the names of some of our members who closed their offices for days at a time to seek first-hand interviews with our law-makers, to others who used their influence where it would do the most good, and who used the mails and wire freely, to bring the true situation to the legislators. These men did not seek recognition, and fearful that I would omit the names of some who are entitled to credit, I will content myself by saying that in the task for which they were chosen, they have done marvelously well, and deserve our thanks and commemoration.

President Barlow resumed the chair and called for the report of the Standing Committees.

SCIENTIFIC PROGRAM

R. J. Calcote, Chairman

The Secretary: In the absence of the chairman, I wish to report that the Committee presents the program as printed and of which you have a copy, this will constitute our report.

SCIENTIFIC EXHIBIT

W. R. Brooksher, Jr., Chairman

I would like to state at this time that we did not receive in our efforts to promote a scientific exhibit all the cooperation we should have from the members of the Society throughout the State. It has only been possible this year to obtain exhibits from two members of the Society. We feel this exhibit should be encouraged by them and they should participate in it. Possibly all of you can't furnish an exhibit but certainly enough can to make it a worth while exhibit. This year we have been forced to draw upon outside organizations as in the past, notably the American Society for the Control of Cancer, the United States Public Health Service and the American Heart Association. I think we will have an exhibit worth your time to look over and would appreciate any comments.

MEDICAL LEGISLATION

H. B. Hardy, Chairman

No report.

In the absence of Dr. Hardy, the President introduced Mr. Peter Deisch of Helena, who delivered the following address:

The work of the Committee on Legislation, with which I am associated, during the past year, is reflected in large measure in the preservation of the laws already in existence. It was the opinion of your Council, as officially expressed by them, that the laws regulating your profession, did not at the present time require revision. The most important bills seeking to amend present laws, were as follows:

S. B. No. 48 (Quarles) providing a composite board of examiners.

S. B. No. 135 (Quarles) establishing a chiropractic board to be the exclusive judges of their right to practice.

S. B. No. 195 (Wahlquist) requiring the medical examining board to examine applicants, regardless of any previous preparation or study, instead of limiting a license only to those who had passed through a course of study preparing them for efficient pursuit of the profession.

S. B. No. 220 (Abington) permitting high-school graduates to matriculate at the Medical School.

S. B. No. 317 (Wahlquist) giving Osteopaths all rights possessed by doctors, but repealing all regulatory medical acts, as applying to Osteopaths.

S. B. No. 322 (Abington) repealing basic-science act.

S. B. No. 395 (Wahlquist) requiring all members of the medical school faculty to have a degree, as pre-medical qualification.

H. B. No. 79 (Clark) establishing a chiropractic board, to be sole judge of their right to practice.

While the purposes of all these proposals were different, yet they were of almost equal importance in the mischief which they undertook to accomplish. Most of them aimed at the destruction of the basic science law, though in varying manners, and all of them met defeat.

For instance, S. B. No. 48, sought to set up a composite board of examiners, to be composed of two eclectics, two homeopaths and three regular doctors, thus placing the regular practitioners in minority on the board, and repealing the basic-science board. All States which now have composite boards provide that regular practitioners shall constitute a majority of the board. This is on the theory that the regular practitioners outnumber all irregulars combined, by a ratio of more than five to one, and is therefore regarded as a matter of simple justice.

As to medical requirements and education, your Society took the view that up to the present time no better plan has been devised for developing character which will maintain the respect of the profession, and lessen criticism against it, than as much education, both pre-medical and medical, as the authorized bodies of the Society can require.

The objection was raised that under the present plan before a boy can be ready to practice, he will be twenty-four or twenty-five years of age, and those who work their way through the re-

quired college work, and medical school, will be twenty-six or twenty-seven years old before they are ready to practice; and as stated by at least one objector to the present plan, that where there was more scholarship, there was less sense.

We answered by saying that your profession, as sensitive as it is, and with its need for maturity and fibre, should have standards making it impossible for a man to become a full-fledged doctor before he is about twenty-four, and that this age is quite, quite young enough.

The bills mentioned all received the hearty support of their authors, and an unknown percentage of other members. The reason we are required to say "an unknown number" is because only one bill which the profession opposed, came to a final vote, that being S. B. No. 317, the Osteopathic bill which received six votes in the Senate and was thus defeated by a majority of more than 3 to 1.

This favorable outcome, which I am again able to report, was due very largely to the interest taken by the profession generally in educating their individual representatives and senators to the mischief of these new proposals, also to the exceedingly valuable and extensive work of the various councilors, and which was correlated and personally brought home to the members of the Legislature by the members of the legislative committee who interviewed the law-makers in Little Rock, and by the watchful care, over all others, of your Secretary.

Anxious as you are to secure for Society the application of the best methods of science to the solution of the problem of the fitness of those practicing the healing art, several facts are obvious in this connection. In the first place, no short-lived, ephemeral, changing legislative committee, can hope to parallel the work of the long-time and experienced members who are now serving. The experience and knowledge gained by the members in the past will be invaluable to them in the future, and it is greatly to be hoped that they will agree to again serve, as they have done in the past. Your attorney can never secure more efficient and helpful cooperation than he has received from the present committee. Not once did they fail to leave their personal affairs behind and come to the capitol instantly, when called upon to do so.

And this aid was needed. Headed by an experienced and able lawyer and politician, in their employ, the irregulars made a determined effort to recover the ground which they had lost by the enactment two years ago of the basic science law. Joined together firmly in an organization for promoting their purposes, exaggerating their voting strength and proclaiming their disposition to use it, misrepresenting their educational qualifications, and their ability to heal the sick, and deriding educated physicians by venomous and prejudicial scandal, all of these opponents persistently and continuously used every known influence to oppose and prevent reasonable standards of professional training.

The cults maintain that the dogmas of their particular cult may be administered without knowledge of the sciences called basic. Their legal advocate made the assertion, in a committee hearing, that there are two kinds of bacteriology, and attempting to prove it out of a dictionary. He was probably sincere in not knowing that this is perhaps the most exact of all sciences, and that the part played by bacteria in wound infections and in infectious disease is now no more a theory than is the part played by steam in the steam engine.

They contend further that a cultist ought to have the right to conduct his own practice in his own way, so long as his patient is satisfied, and that there should be no interference between him and his patient by the State; a proposition that is denounced by everybody who knows anything about the maintenance of public health, but which will always find acceptance by somebody having the authority to participate in legislative enactments. A recent issue of the American Medical Journal, quotes the veto message of Gov. Buck of Delaware in returning without his approval, a bill to create a board of chiropractic examiners, and to regulate chiropractic practice. His statement follows:

"The purpose of the act, as I understand it, is to legalize the practice of chiropractic. Practitioners of this cult are not recognized now. Do they profess to be doctors in the same sense of the term as is commonly understood to apply to men and women of the medical profession? Insofar as I am able to determine, there is not a recognized medical school in the country that includes in its curriculum a course in chiropractic. This fact is singularly significant.

"Even to the lay mind the idea that all disease of whatever character is due to spinal displacements of a mild sort, and that cures of such ailments as tuberculosis, smallpox, diphtheria, scarlet fever and others can be effected by manipulation and fingering of the spine is preposterous.

"Before returning this bill to you I have satisfied myself that the training and education of a chiropractor, or drugless healer, needs to practice his art, does not fit him properly to advisedly treat the sick, inasmuch as he is not qualified to diagnose ailments nor recognize communicable diseases and to take measures to control them. He is therefore an opponent to the department of health.

"Wherefore, it seems to me that it would be inconsistent for the Legislature to appropriate, as it will do, money for the State Board of Health, which board is trying to eradicate communicable diseases, and at the same time legalize the practice of a cult which does not believe in the germ theory of disease, but does teach and believe that such diseases as scarlet fever, etc., are due to a distracted vertebra and the method to prevent and cure such disease is to see that everybody has a normal spine."

Over all the agencies that have been engaged in presenting your arguments to our legislative assemblies respecting the basis for the regulation by law of the occupation of healing the sick, and therein supporting the establishment or maintenance of the single standard of qualification for all healers alike, and correlating the work of them all, is the Secretary of your Society. To a very large degree, and in a very just sense, the success of our efforts is due to his diplomatic and able handling of the various controversial subjects, that arise in the profession. To the resident secretary comes information as to how differences can be adjusted, without which our efforts must largely be in vain. He is a clearing house of information, and his inspiration, persistency, vigilance and advice, arising largely through his thorough familiarity with all problems affecting the profession, is after all, the essential element which binds the Society together not only in matters of legislation, but in all

others. A prodigious amount of work comes to his office, from all corners of the State, keeping him in intimate contact with all problems. He is a great administrator, a guiding force, and his crusading spirit will continue to win for us, so long as we continue to possess the traits which I have named.

So far I have discussed proposed legislation of a mischievous nature, which was defeated, and now it is gratifying to be able to report a constructive achievement in the enactment of S. B. No. 325 (George) now known as Act No. 211 of 1931, and which reclassifies demands against estates. Until the passage of the act in question, the first class of claims consisted only of funeral expenses, and if this expense exhausted all the available assets of an estate, nothing would remain for the expenses of the last illness. The new law includes in the first class of claims, expenses of medical and surgical attention, nursing and hospitalization. This has been a long-needed reform, and is one that was so just, and so easily understood, that it received a unanimous vote in the Senate, and passed the House by a vote of 67 to 15. The passage of this bill afforded immense gratification to your committee, which initiated it, as in numberless cases during the long years that the former law has been in force, the funeral expenses exhausted all the resources of an estate, and the doctor was therefore unable to receive any compensation for his services, as was also the case with the hospital and nurse. This law is now in effect, as it bore the emergency clause.

So long as your President, your President-elect, and your Past Presidents, and your other officers, continue to be the real leaders, the vigilant and earnest workers, that I have known these men to be, so long may you be assured that nothing untoward will mar the progress your Society is making toward the goal which our State has the right to expect.

The President: We want to thank Mr. Deisch for his wonderful report. It will be referred to the Reference Committee.

We will now hear from the fraternal delegate, Dr. Hunt of Texarkana.

Dr. Hunt: I feel just a little bit ashamed to come and say "Howdy" because I am shaking my own hand, being a member of the Arkansas Medical Society. But I have had this privilege delegated to me by Dr. White, who was the regular appointee from the Texas Medical Association as a fraternal delegate. Dr. White being absent, he wrote kindly requesting that I come and represent the State Medical Association of Texas. I want to say to you in the name of the president, Dr. Burns, that he wishes to extend to this great medical organization of Arkansas a very hearty greeting at this time. He wants to extend to you, in conjunction with the medical profession of Texas that most hearty fraternal feeling that should exist between all co-workers. In addition to that, we want you to know you have a very warm invitation to visit the meeting of the Texas Medical Association which meets in Beaumont May 5, 6, 7 and 8, all you will need as to registration is your card as a member of the Arkansas Medical Society. The rate will be one and one-third on the railroads from your home to Beaumont, if you wish to come. If you come you will receive a most hearty welcome. In addition to that the entire delegation of delegates and members of the Arkansas Medical Society are more than welcome in Texarkana. (Applause.)

CANCER CONTROL

Dewell Gann, Jr., Chairman

Dr. Kittrell: Dr. Gann is in Europe and will not be here to read his report, and as I am a member of that committee, I have been requested to read the following:

Mr. President and Gentlemen of the House of Delegates:

Your Committee on Cancer Control respectfully submits the following report:

This committee in connection with the State Committee of the American Society for the Control of Cancer has continued its educational activities throughout the year with renewed interest. We believe the people with cancers are reporting for treatment earlier than they did ten years ago when our educational program was begun. We have used the mails, the press and radio and several large public meetings have been addressed by speakers of note on this subject.

The only new happening of the year has been an attempt to get recognition of our cancer clinic at St. Vincent's Infirmary. This we hope will soon be accomplished. The trend of the times is toward higher specialization in the treatment of the cancer case.

Other than the above we have very little to offer. The cause of cancer remains undiscovered, the hereditary problem questionable and its transmissibility has been accomplished in lower animals only. It is insidious in its onset, painless in its incipiency and local in its early stages, when curable if properly treated. IN ITS EARLY RECOGNITION LIES THE HOPE OF CURE.

Surgery, radium and X-ray are the methods of choice in its treatment.

Recommendations: That every member of the Society consider himself a member of this committee and assist us in this work. Further, that the Society continue its annual contributions to help defray the committee expenses.

(Signed) DEWELL GANN, JR.,
Chairman.

The President: Dr. Bathurst states that inasmuch as this report requests an appropriation, it will be referred to the Council.

HEALTH AND PUBLIC INSTRUCTION

F. O. Mahony, Chairman

Mr. President, Members of the House of Delegates:

Health conditions in Arkansas compare favorably indeed with that of the other States.

The educational forces at work through organized medicine and other recognized organizations are proving a great economic factor in addition to a healthier citizenship.

Our own child, the Arkansas State Health Organization, under the leadership of our efficient Dr. Garrison comes in for most favorable recognition as the outstanding factor in this work. The Auxiliary of the Arkansas Medical Society is to be commended for its activities. The Arkansas Anti-Tuberculosis Association under the efficient leadership of Miss Erle Chambers is one of the State's greatest assets. The American Red Cross with its nurses and its marvelous work in flood and storm disasters brings relief to sufferers and the Federation of Women's Clubs since the passage of the National Pure Food Law has been a well recognized factor. The American Legion Auxiliary has made itself felt in child welfare work throughout the nation.

It is a recognized and undisputed fact that these organizations are directly or indirectly the result and offspring of organized medicine and that the guiding hand of organized medicine must always be recognized and felt to insure a safe progress for the good of our commonwealth.

Certainly we must maintain a complete understanding and a full and hearty co-operation between our parent organization The Arkansas Medical Society and its offspring, the State Board of Health, else the public as well as both our organizations will suffer.

It has come to our knowledge that the directors of Health Units, with their assistants are going beyond their authorities by engaging to a certain extent in the actual practice of medicine rendering definite service to all applicants regardless of their ability to pay for regular medical service, holding tonsil clinics in a manner contrary to medical ethics, pauperizing pay patients and giving inferior service.

It has also come to our knowledge that the directors of health units in many counties are exceeding their authority and are practicing curative medicine instead of confining their activities to the prevention of diseases and in so doing, they are encroaching upon the rights and duties of physicians who are supporting organized medicine.

These agencies are paid from tax moneys of the people, maintaining officers, nurses and assistants who are in direct competition with the doctors of that community.

The medical man is beginning to resent being taxed for the maintenance and support, both moral and financially of a competitor.

It is the opinion of your committee that the medical director of health units and his assistants and those in charge of his work, should practice, preach and teach the people of his community the latest and best known methods of preventing disease.

We condemn, in no uncertain terms, the practice of holding free tonsil clinics or part pay clinics conducted under the direction of health units as being unwholesome and unsound with a tendency to pauperize a class of pay patients who are self-supporting. We condemn the practice of treating venereal diseases and the practice of conducting free physical examinations to all who apply for same and giving expert opinion as to diagnosis and treatment. Such practices are detrimental to organized medicine and contrary to the principles under which our State health organizations were enacted.

We, your committee, consider such practices detrimental and contrary to the principles under which our State Board of Health was enacted.

We recommend that the House of Delegates take some suitable action to remedy the existing condition, that better co-operation may prevail between organized medicine and our health organizations.

RESOLUTION CONCERNING FOOD FADDISM

WHEREAS, Much misinformation is promulgated today on the question of diets, etc., causing the introduction in the American diet—food fads.

Very few of these fad foods can take the place of the older staple foods, good meat, dairy products, green vegetables, fruits and the better grades of bread prepared from white flour.

Any balanced diet should contain animal protein, fruits, vegetables, especially the leafy vegetables, which will insure adequate vitamin and mineral salt content, digestible fat such as butter-fat, and sufficient of the digestible carbohydrates to afford readily available energy.

Carbohydrates, including sugars and starches, but especially starches, furnish the American public their main fuel for energy, the quantity varying with the amount of physical activities which the individual expends. Much of the starch should be supplied by the most available and easily digestible foodstuffs, of which white flour is an excellent example.

The allegation that white bread, meat or any other staple food, when employed in mixed diet is responsible for certain grave illnesses, is not supported by scientific facts.

THEREFORE, BE IT RESOLVED, THAT:

We desire in the public interest, to place on record that in our opinion:

1. The exaggerated claims for various fad foods are entirely unwarranted by scientific evidence or practical experience; and the advertising and other propaganda furthering their substitution for the older articles of diet should be condemned.

2. The danger of nutritional deficiencies has been grossly exaggerated. No one food is a perfect food; but a diet consisting of dairy products (especially milk), leafy vegetables, fruits, meats and easily digested starches for heat and energy, furnishes an excess of all food factors necessary for proper growth and nutrition and resistance to disease.

3. Any variation from normal diet should only be prescribed by a properly trained physician after a careful study of the dietary requirements of the individual seeking advice.

F. O. MAHONY, El Dorado,
H. T. SMITH, McGehee.
W. G. HODGES, Malvern,
A. F. HOGE, Fort Smith,

Supplementing the report of the Committee of Health and Public Instruction, Delegate J. B. Wells of Lonoke County introduced the following resolution:

RESOLVED, By the House of Delegates of The Arkansas Medical Society, that:

While it is not our purpose to dictate the policies of the State Health Department, we realize that to a great degree their success depends on the cooperation between the Health Department and the members of this body, and a frank expression of our needs, if received by them in the proper spirit of cooperative endeavor, will lead to great good to the entire population of the State.

We deplore the fact that the policies of the State Board of Health. as expressed through the activities of the County Health Units, tends toward the practice of medicine rather than toward the more appropriate and homely functions of rural sanitation and preventive hygiene.

It is also our opinion that such minor surgical operations as the vaccination against smallpox, typhoid fever and diphtheria, while seemingly small in themselves, are potentially fraught with the same dangers and are governed by the same laws of bacteriology and infection that govern all surgical procedures, and should be performed only by competent, legally qualified physicians and not by nurses.

While the value of the wholesale removal of the tonsils of children as a public health measure for the prevention of communicable diseases is a debatable question, the preventive effect of such sanitary measures as the screening of houses, draining and oiling the breeding places of mosquitoes, the destruction and exclusion of flies, the proper disposal of tin cans and the improvement of the rural privy cannot be questioned; and we are sorry to note that these latter measures are sorely neglected while the enthusiasm for the "tonsil clinic" seems to grow.

ARGUMENT:

1. The importance of proper technique in vaccination is greater than the inconvenience or danger to the one individual who may have a bad result, for every time an infection takes place hundreds hear of it and there is created a strong local sentiment against the procedure, making it difficult or impossible to get 100 per cent vaccinations in communities where epidemics may make it imperative that all be vaccinated. Therefore we maintain that all vaccinations should be done with the most scrupulous care, with exact and approved technique, and only by licensed physicians, whether they are health officers or private individuals.

2. It is claimed that tonsillectomy is a proper public health procedure because the removal of diseased tonsils and adenoids tends to prevent future diseases of the throat, nose and ears, and improves the general health of the child. The same claim can be made for appendectomy. It prevents future attack, subsequent peritonitis, abdominal abscess and metastatic gall-bladder infection. So can removal of a chronically infected gall-bladder possibly prevent general cholangitis, Charcot fever or acute pancreatitis, but no one will advocate that these operations be done on the diagnosis of a district nurse and under the unhygienic conditions of the usual "tonsil clinic."

3. It is clearly one of the duties and in the power of the State Board of Health to make and enforce regulations in regard to the disposal of tin cans, buckets, old tubs and other utensils that have passed their periods of domestic usefulness, yet these things so cluttered up the commons about the city of Little Rock last year that it became dangerous for man or beast to stray from the public roads. This became such a public nuisance that The Arkansas Gazette put on a publicity campaign against it, but neither the State Board of Health nor the Pulaski County Health officers had a word to say on the subject, though this occurred in a county where they are spending money on antimalarial work.

4. The greatest value of rural sanitation lies in the fact that it teaches people to take care of themselves, cuts down the incidence of acute infectious diseases and tends toward independence rather than pauperism. Its application is universal rather than individual and should be the paramount function of every State health department.

Dr. Mahony: I move this be adopted.

Seconded. Carried.

A second resolution read from the report.

Dr. Mahony: I move this resolution be adopted.

Seconded. Carried.

Dr. Bruce, Helena: Is this charge general or has it reference to some specific acts where the practice of curative medicine has been prevailing? I want to say as one of the medical directors in the State that during this drought relief the situation was absolutely forced upon us to do curative practice. In my own county of Phillips my statistical records will show that we gave treatment to 1,800 cases during the first three months of this year. These people would have been in a bad condition had it not been for this relief. I am very unpoular at the present time, being accused of cruelty and heartlessness on all sides by not prescribing for these cases that come in that are *supposed* to be indigent. I have had to refuse absolutely to prescribe for any case of sickness that comes to me unless declared a county pauper by the county judge or referred to me by some committee from the Red Cross organization. I feel in justice to the Public Health workers of the State that something should be said in their behalf because I know all of us are not doing that kind of work and we are not promiscuously doing such practice. In my own case, I want to raise my voice in defense of that proposition. I agree that these wholesale free tonsillar clinics are not in good vogue. I don't approve of them. When we have a free tonsillar case, this case is investigated and if they are found to be absolutely indigent and the child would go on and suffer the consequences unless something was done for him, it is done by our local specialists, and in some cases the school itself. I hope this committee didn't make a general charge against all "medical directors" in the State, that we were overstepping

the bounds and doing a general practice, for I don't think that's a fact.

The President: This will be turned over to the Reference Committee.

HOSPITALS

M. E. McCaskill, Chairman

Mr. President, Members of the House of Delegates:

The March 28, 1931, issue of the Journal of the American Medical Association says that there was an increase in the total work done by all hospitals in the United States in 1930 despite the business and industrial slump.

The number of patient days during 1930 amounted to 278,634,430, an increase of 13.364,-840 over 1929. The average daily number of patients showed an increase of 36,616.

During the year 1930 the number of beds in all types of hospitals rose from 907,133 to 955,869, an increase of 48,736.

For the year 1930, especially, there was an unusual slump in the patronage of hospitals maintained by non-governmental agencies.

The number of general hospitals far exceeds the number of any other type. There were 4,302 general hospitals in 1930 as compared with 4,268 in 1929.

In 1930 the bed capacity in general hospitals increased from 357,034 to 371,609. The increase in the number of patients has been proportionately less than the increase in capacity.

Of the beds in general hospitals 64.7 per cent were occupied on the average in 1930, compared with 65.5 per cent in 1929.

In Arkansas there was in 1930 seventy-five hospitals, with 7,896 beds, 250 bassinets, average patients 5,842. Of this number fourteen hospitals were government owned with a bed capacity of 5,083, average patients 4,620; and non-government owned, 61 hospitals with 2,813 beds, average patients 1,222. There were 59 general hospitals with a capacity of 2,995, average patients 1,427 (less than 50 per cent occupied).

Nervous and mental two with a capacity of 3,652 and an average of 3,535 patients. Tuberculosis, one, with a capacity of 517 with average patients 500. Maternity, one, capacity 40 and an average of 22 patients. Industrial, four, beds 3,445, average patients 129. Children's one, beds 76, average patients 30. Growth of laboratories, Roentgen-ray and Physical Therapy Department and School of Nursing from 1923 to 1930.

Laboratories from 30 to 51, X-ray Departments, 29 to 51. Departments of Physical Therapy, 22 to 24 (1927 to 1930), Schools of Nursing, 20 to 24.

Counties having hospitals in Arkansas; there are 75 counties, in 1920 eighteen counties had hospitals and in 1930 there were 33, the per cent of counties having hospitals increasing in the past ten years from 24 to 44 per cent. Not included in this list are the institutions which because of alleged unethical or criminal practices, admission to their staffs of members who are seriously unqualified, either morally or professionally, flagrant methods of advertising or for other valid reasons, are deemed unworthy of being included in any list of reputable hospitals.

There were seven hospitals with a bed capacity of 150 which were refused registration by the American Medical Association.

Federal and State governments are entering into competition with private agencies in the hospital field to a constantly increasing extent, this may be interpreted in either of two ways. One may see in it a belated recognition of civic duty in the matter of chronic cases where family financial support fails: or one may view it as a preparatory step in a policy of unlimited expansion whose ultimate goal is State medicine.

There has recently been reorganized the Arkansas Hospital Association, with Mr. Lee Gammill, Superintendent of the Baptist State Hospital, President. They were very active during the recent meeting of the Legislature and were instrumental in causing to be passed Bill No. 206 which makes it a misdemeanor to defraud hospitals, doctors or nurses in securing services under false pretenses by misrepresenting the financial status, also Bill No. 211, giving hospitals, doctors, nurses and druggists, first class claims against estates—previous to this only undertakers had first class claims.

The officials of this organization ask for the encouragement of this society and desire a close association that the two bodies may work in harmony and more effectively to accomplish the much to be desired improvement in the practice of medicine and the operation of the hospitals.

M. E. McCASKILL, Chairman,
STANLEY M. GATES,
W. V. LAWS,
L. M. LILE,
WM. A. SNODGRASS,

The President: This will be referred to the Reference Committee.

ARRANGEMENTS

L. J. Kosminsky, Chairman

Mr. President and Gentlemen of the Arkansas Medical Society: You are probably peculiarly situated, being guests of Texarkana, as you are not only the guests of the Miller County Medical Society but also of the medical profession at large in Texarkana, which consists of both Miller and Bowie County Medical Societies.

We have a very unique arrangement. We have both medical societies but have only one meeting, and part of the meeting is governed by the officers of the Miller County Medical Society and the other portion of the meeting later on governed by the Bowie County Medical Society, and vice versa. We have one meeting and each society takes up its business and the scientific program is conducted together. Every man in Texarkana is a member of the reception committee, which will be designated by these white ribbons. They shall endeavor to make your stay here not only profitable but pleasant if you just call on us at any time, morning, noon or night.

This evening at eight o'clock we will have an open session, not only for the doctors but we hope you will bring your wives and sweethearts. Those that haven't any wives, we will be able very readily to get you a sweetheart because I am proud to say that the doctors of Texarkana have so conducted themselves that the opposite sex seem to be proud of them.

Tomorrow morning at 8:30, one block from the hotel we will have memorial services. Gentlemen,

this memorial service is indeed a sad one at this time because just a few days ago passed from our midst one of the old practitioners, one who was loved and respected by the community at large and by the medical profession. and one of your past presidents, having been president only two years ago, Dr. R. H. T. Mann; so that you can realize what a sad meeting we have here today when we miss our own beloved members, who has been a staunch and true medical society man, who stood for everything that was right, a man who may have had, to your mind, some peculiarities but, gentlemen, when we stop to think, we all have them. As long as we are human we are prone to err, we have our shortcomings; but no matter what shortcomings this man may have had, he was honest and sincere, he was upright and one of the highest types of men morally, socially and professionally.

You have the program before you and in it you will see that tomorrow evening in this same hall we have the President's reception, at which we have tried to provide for you all kinds of entertainment, including vaudeville and dance and, those who do not care to dance, cards. We have two very good golf courses here. Texarkana is proud to have the Texarkana Golf Course. I can't tell you much about golf. It will take some of these others to do that. I haven't gotten old enough that I can't chase anything else but a golf ball but when I do I will play golf. But we have a course at the country club second to none in the South and we hope you golf enthusiasts will take the opportunity to go there.

We hope you will enjoy your meeting here and if there is anything you wish to know there is not a man in the medical profession of Texarkana that cannot grant it, as they all stand ace high.

We have our differences. But when it comes to a thing like this, there are no lines drawn in Texarkana. We don't know State lines. Of course, we have the Texas and the Arkansas side but the medical profession is in unison. Some one may have a little enmity towards the other and you all expect that. We never had a fight between the doctors. Of course, we are all out to get what we can, when we can and how we can, but when you begin to get old and gray-haired, you don't feel that way. You feel, if you have had any grievances, you should cast them aside. A lot of people say, well, Dr. Jones says this about you and Dr. Smith says this about you, but when you begin to get old you begin to realize that when one doctor knocks you you evidently must know something because the man that does not know anything at all soon kills himself, and they don't have a chance to knock him. They won't knock that kind of man. The only man that the other man talks about is the man that he fears professionally and just as soon as we begin to realize that we can't all do all of the practice. the laity is beginning to realize that the doctor who talks about the other fellow doesn't amount to much or he would keep his mouth shut. If we can get rid of these petty things we will be the biggest men in the country.

On behalf of Texarkana, and both Miller and Bowie County Medical Societies, I wish you all a hearty welcome and hope you will enjoy yourselves and if there is anything in the world you want we will try and furnish it to you. (Applause.)

Dr. Kosminsky: I want to present these flowers to you on behalf of the Ladies Auxiliary.

The President: I thank you very much.

REPORT OF COUNCIL

Dr. Dewell Gann, Sr., Chairman

We have had two mid-winter sessions, one on October 7th and one on November 13th, which I think have had a great deal to do with our holding on to what we have done in the matter of our basic science law. Inasmuch as it is published in the Journal, I do not think that it is necessary to take up your time in going over it, as it will be taken care of in the final report.

The President: That will be referred to the Reference Committee.

STATE BOARD OF MEDICAL EXAMINERS

S. J. Allbright, Secretary

Since the last report forty-four certificates of license to practice have been issued by this board. Twenty-five were issued by examination, one graduate of the University of Tennessee School of Medicine and twenty-four graduates of the University of Arkansas School of Medicine.

Nineteen certificates were issued by reciprocity from other States coming from Missouri, Virginia, Tennessee, Louisiana, Illinois, Iowa, Kansas, Mississippi, New York, North Carolina, Oklahoma and Texas.

Each applicant for license must have the approval of the Basic Science Board, whether he makes application for license by examination or by reciprocity; this has not disturbed our reciprocal relations with other States.

Three licenses were revoked during the year. In one case the licentiate had been convicted and served a term in prison for forgery.

Another had been convicted and served a prison sentence for violating the Narcotic Law. And the other was revoked because the license upon which his certificate was issued by reciprocity was revoked for cause in the original state.

One license which had been revoked, 1926, was reinstated upon petition of a majority of the members of the County Society in which the applicant was a member.

Thirty-seven licentiates have been certified to other States for license by endorsement. These have been accepted by Texas, Wisconsin, Kansas, New Mexico, Louisiana, Ohio, Missouri, Oklahoma, Michigan, New Jersey, California and Alabama.

The board has been instrumental in securing the conviction of one man who has been practicing medicine in Arkansas for twenty years without license.

There are more illegal practitioners in various parts of the State. In some places it seems difficult to get the district attorney to take action, in other instances the illegal practitioner moves when he receives a letter from the board and is not heard of again until he has been practicing in some other community six months or more.

The only solution to this is annual registration of all physicians, as Colorado and several other States are now doing.

(Signed) SAM J. ALLBRIGHT,
Secretary.

The President: Referred to the Reference Committee.

REPORT OF DELEGATES TO THE A. M. A.

We wish to refer our readers to the abstract of the proceedings of the House of Delegates published in the August, 1930, issue of the Journal.

The Secretary: I move that the printed report in the Journal be not read at this time. Carried.

REPORT OF SECRETARY

Mr. President, Members of the House of Delegates:

The State Medical Society ended the year 1930 with 1,134 members. During the year, several were dropped for non-payment of dues, deaths, and removal from the State. A few new members were enrolled.

THE JOURNAL:

Since the Fort Smith meeting of 1930, we have published the entire proceedings of the House of Delegates and the General and Scientific Session, thirty-two original articles, fourteen editorials, one editorial clipping, thirty-one abstracts, with numerous personal and news items, reports of County Medical Societies, and miscellaneous items, making a total of 261 pages.

I collected from advertising $4,821.08, an amount exceeding receipts of any previous report.

The funds on hand for the Gorgas Memorial, not included in my financial report amounts to $220.87.

Our Financial Statement Shows:

Cash on hand at close of last session			$12,056.14
Received for interest:			
Secretary's account	$ 62.25		
Journal's account	103.75		
Treasurer's account	148.56		
Student Loan account	33.90	$ 348.46	
Received on principal Student Loan		120.00	
Received from Journal advertising		4,821.48	
Received for dues since last meeting		4,951.00	$10,240.94
			$22,297.08
Disbursements:			
Current expense		$6,188.39	
Legal and Legislative		2,593.70	
		$8,782.09	
Bank Exchange:			
Journal and Secretary's account		2.37	8,784.46
Cash on hand			$13,512.62
Notes Receivable, Student Loan			470.00
			$13,982.62

Unless one is in intimate contact with the Secretary's office it would be extremely difficult to appreciate the voluminous clerical work that demands an increasing amount of time and labor.

In closing, I am profoundly grateful for courtesies and kindnesses shown me by the officers, councilors, and many of our members, during the past year.

And finally, permit me to say, it has been a privilege to serve.

Respectfully submitted,

WILLIAM R. BATHURST.

REPORT OF THE TREASURER

Balance reported last Annual Meeting, May 5, 1930	$ 2,092.92
Received from Secretary during year	13,913.23
Interest on Savings Account	148.56
Interest from Student Loan	33.90
Payment on Principal Student Loan	120.00
	$16,308.61
Disbursements, Vouchers 329 to 359, inclusive	8,782.09
Balance on hand	$ 7,526.52

The President: These reports go to the Council. We are now open for new business.

Dr. Cothern: In listening to the report of our attorney, he told us of most of the legislation that took place this year in behalf of the Arkansas Medical Society. Some of you may not know something of the legislation that was contemplated and intended to be taken up pertaining to our medical school. The medical school is something we are all very proud of, but the thin ground on which it is resting at times is unknown to most of us. I think there has been some bitter feeling engendered by what are called the ins and outs. It happened to be my lot to be the goat and the really hard work I did was to keep the State Society from being involved in the fight.

From the experience we have had and from what we saw, I think it would be well for this House of Delegates to recommend that a committee be appointed to get information as to the school's needs, and what we should do, and then to work for legislation for building a school and making it better. Such action would forestall all criticism of the school and factional fights.

Dr. Parmley: I would like to say something regarding the medical school and medical legislation since the question has come up. As a member of your legislative committee I had something to do with what went on about legislation for the medical school and about the appropriation for the school as well as the basic science law.

There is just this about it: if we want a medical school, we have to get behind it! Some of you don't like the way it is run. I

don't like some of the things about the school either. Some of us don't like each other very much. That obtains all the way through and will just as long as there is a group of medical men and a medical school to fuss about. But nevertheless, if we are going to have a good medical school we have got to get behind it as a Society, or we might as well close it up.

One group goes out to the Legislature with an idea concerning what they want, and another group goes out there with an opinion as to what they should have, or what the school should have, that is entirely different. Consequently, the members of the Legislature don't know what really is needed.

Therefore, it makes it rather hard for the members of the legislative committee or the legal adviser or the Society officers to tell them just what to do. I believe that the idea should become firmly fixed in our minds that the three medical elements of this State, the Arkansas Medical Society, the medical school and the State Public Health Service, should get together and submit what legislation they want to your legislative committee so they can act accordingly and advise the members of the Legislature about what to do.

When we are working at cross purposes, we don't get very far. We came very nearly not getting anywhere, along certain lines and in certain things in this last Legislature. It takes coordination of effort and unity of purpose, all working to one end, to gain the things we want.

I would like to see this Society go on record to get behind the medical school. And if the majority don't like the way it is going, get behind it and make it go the way they want it to, because it is our medical school and we have got to make it a good one.

Dr. W. A. Snodgrass, Little Rock: I would like to see a committee appointed to find out what the school needs and then let every member of the Society get behind that committee and support the school. The State Medical Society has never supported the school as it should. I think the committee should work that point out. I make that as a motion.

Seconded. Carried.

The President: I believe that a motion would be in order, at this time, if it meets with your approval, for the incoming president to appoint that committee.

Dr. Snodgrass: I will accept that amendment.

The President: Not that I want to "pass the buck," but my administration will cease at this meeting.

Dr. Ellis: Inasmuch as Dr. Rhinehart is one of the teachers in the school, I doubt the propriety of that. I think this should be left to an unbiased judgment and I believe you are the man to make the appointment.

The President: I will make the appointment if it is the desire of this organization.

Dr. Cothern: I suggest that the Chair take time and make the appointment at the next meeting of the House of Delegates.

Dr. Nichuss: I move that the acting president confer with Dr. Rhinehart in making that appointment now so that the committee can discuss these things at this meeting.

Dr. Foltz: Whom did you figure on appointing?

The President: Dr. Snodgrass, whom would you suggest?

Dr. Snodgrass: One from each councilor district.

The President: Some one suggests that is too many. Some one said that the best committee in the world is one of three and two of them sick.

Dr. Foltz: As a rule that is true but I think this committee is probably going to hold in its hands a weapon more powerful for the weal and woe of the profession in the State of Arkansas than any committee that has been appointed within the last twenty years. It is going to find that there will be lots of work to do. It is going to find that there will be lots of information to gather. If this committee acts to the best interests of all concerned, thoroughly, fearlessly, unbiased and non-politically, it will be a wonderful help, it will be a correlating force, but if it acts otherwise we are going to be right back where we are. I feel that a larger committee should be appointed than three. I think the suggestion that you have a member from each councilor district is very good. I will make that motion, that you have a committee consisting of a member from each councilor district.

Seconded.

Dr. A. G. Lee, Texarkana: It seems to me that a member from each councilor district would be a rather large committee but I

think that can be properly arranged by their appointing a smaller committee and the councilors from each district constitute an advisory committee.

Dr. Gann: They will not all attend.

Dr. Cothern: From the correspondence and from the work that has come under my observation during the past session of the General Assembly, this committee has a great amount of work to do, because they first have to get some information and to take this up with the Council on Education of the A. M. A. and the Association of Medical Schools. My suggestion would be that we take one member from each agricultural district of the State—there are four districts—and one from the State at large, and then let the Council be an advisory committee, as the doctor suggested.

Dr. W. A. Snodgrass, Little Rock: The Council comes more in contact with the profession in the State than any other group of men and they visit each county as they should during the year and will have the opportunity to bring this matter up. And if we want to appoint a subordinate committee, it can be worked out all right. But you have to get in contact with the men. If you make the committee too big, it will be unwieldy. I don't think three men will hardly have an opportunity to come in contact with them like the Council will.

Dr. J. A. Foltz, Fort Smith: There are only ten councillor districts. You wouldn't have all of them perhaps at any time, but it would give you an organization that could have one or two general meetings.

The result would be that that organization would appoint its best men, and they would know the best men and they would know what they were doing, and they would be representative. It is a proposition in which you have much to gain and, as I can see it, you have nothing to lose by making this geographically representative and having each councilor district represented. Then let them appoint, if they care to, at one of their general meetings three or four picked men to do the work, as we have always done it. I think that should be done.

Dr. L. V. Parmley, Little Rock: I want to defend the doctor's motion here which has been attacked. There will be a lot of work for this committee. The more there are on it, up to the number of one from each councilor district, the better it will be. There is a good part of this medical profession that is not sold on the medical school and they will have to settle it one way or the other. I think we should have these ten men. I don't think it is too many at all.

The President: Dr. Foltz, ten is an even number. They might be divided.

Dr. Foltz: I move then that the Secretary be made a member at large, with the privilege of casting a vote in case of a tie.

Seconded.

The President: We have a motion before the House of Delegates with a second. The question has been called. Dr. Bathurst suggests this question, "Will this meet with the approval of the medical school?"

Dr. Kosminsky: Can't this committee confer with the school and see whether it will meet with their approval? This would be a part of the duty of this committee.

The President: I think the best thing would be to offer our good offices to the medical school and if they don't want to accept it they can reject it.

Dr. Foltz: That would be my idea. I think that is the idea of every one here. We are merely offering our good services to do whatever we can. If this is desirable or suitable, we will get in the harness and do it. If it isn't, of course that's all right. We don't want to push ourselves.

The President: Before I put this motion, will say that I have had considerable correspondence regarding our medical school. You all know there is friction in the school. I took the position as President of the Arkansas Medical Society that I didn't think I had any right to take sides in this controversy, that it should be threshed out right here where it should be, and I hope you will stand by me in that position. I refuse to take sides or to do anything. I did suggest the appointing of a committee and then I decided it was the thing for this organization to do and not me. I want to go on record on that.

Cries of "Question."

The motion being put, it carried unanimously.

The selection of the Nominating Committee being in order, the following were chosen:

PERSONNEL OF THE NOMINATING COMMITTEE

First Councillor District—W. W. Verser, Harrisburg.

Second Councillor District—Sam J. Allbright, Searcy.

Third Councillor District—E. D. McKnight, Brinkley.

Fourth Councillor District—A. Isom, Dumas.

Fifth Councillor District—J. A. Moore, El Dorado.

Sixth Councillor District—A. S. Buchanan, Prescott.

Seventh Councillor District—W. G. Hodges, Malvern.

Eighth Councillor District—L. V. Parmley, Little Rock.

Ninth Councillor District—J. H. Fowler, Harrison.

Tenth Councillor District—W. R. Reves, Alma.

On motion the House of Delegates adjourned.

The following resolution was introduced at the close of the morning session of the House of Delegates:

The Arkansas Medical Society records with deepest regret the passing of Doctor R. H. T. Mann, whose death occurred April 15, 1931.

For the two years of 1927 to 1929, president of the Society, he brought to that important position a breadth of learning, a democratic and sympathetic spirit, and a measure of ability and energy rarely equalled and never excelled. He was one of God's noblemen; an honor to his profession and a loyal and devoted member of this Society; he had a great mind and a great heart, and they were both always devoted to the improvement of conditions within his influence, and to the welfare and happiness of those who depended on his ministrations. He is now among our sacred memories; appropriately may it be said of him that he was an honorable councillor, a good man and a just; therefore

BE IT RESOLVED, That in the death of Dr. Mann, the Society has lost one of its most highly respected and best loved members, and the State of Arkansas one of her great citizens; while our Society has been bereft of one of its ablest members.

HOUSE OF DELEGATES

Last Day

The House of Delegates was called to order by the President, Dr. Barlow, at 1:30 p. m., there being a quorum present.

The report of the Nominating Committee was the first order of business.

We, the Nominating Committee, wish to submit the following report:

For President: Will H. Mock, Prairie Grove; P. H. Phillips, Ashdown; J. S. Rinehart, Camden.

First Vice-President: L. J. Kosminsky, Texarkana.

Second Vice-President: W. A. Snodgrass, Little Rock.

Third Vice-President: A. Isom, Dumas.

Treasurer: M. J. Kilbury, Little Rock.

Secretary: Wm. R. Bathurst, Little Rock.

Councilors

First District—W. M. Majors, Paragould.

Third District—M. C. John, Stuttgart.

Fifth District—L. L. Purifoy, El Dorado.

Seventh District—Dewell Gann, Sr., Benton.

Ninth District—D. L. Owens, Harrison.

Thereupon the chairman appointed H. T. Smith and L. V. Parmley tellers. The House of Delegates proceeded to ballot upon the three names selected for the office of President-elect.

Upon the first ballot Dr. Will H. Mock of Prairie Grove received a majority of all votes cast and was declared elected.

Dr. Cothern: I move that the rest of the recommendations by the committee be voted as a unit and the Secretary be instructed to cast the vote of the Society.

Carried.

The President cast the vote for the Secretary.

REPORT OF THE COUNCIL

Dewell Gann, Sr., Chairman

(Tuesday, April 21, 1931)

The Council called to order at 12:15 p. m.

Present: Councilors Verser, Evans, John, Smith, Purifoy, Archer, Gann, Sr., McCaskill and Wolfermann, President Barlow, President-elect Rhinehart, Secretary Bathurst, Attorney Deisch. Guests were: Dr. Dupuy of New Orleans, Dr. Kinsella of St. Louis, and Mr. Murdock of Wichita, Kansas.

The meeting was devoted to talks by the honored guests.

Drs. Smith, Wolfermann and McCaskill were appointed auditing committee.

Adjournment.

(Wednesday, April 22, 1931)

Council called to order at 12:30 p. m.

Present: Same as previous meeting with the exception of the guests.

The sum of $300 was appropriated for subscriptions to Hygeia for another year. The President and Secretary to make up the list of those to whom to be sent.

Auditing Committee reported as follows:

"We examined the records of the Secretary and Treasurer and found the records in good condition and all moneys accounted for."

The sum of $100 was appropriated for the use of the Committee on Cancer Control for another year.

The Secretary was authorized to pay all expenses incident to the present meeting.

Mr. Deisch was maintained as legal adviser for the Society for another year. The compensation to be agreed upon between him, the President and Secretary.

The Secretary was allowed his usual honorarium.

Drs. Parmley, Hardy and Norwood, members of the Legislative Committee, were each voted an honorarium of $100.

(Thursday, April 23, 1931)

Council called to order at 12:30 p. m.

Present: Verser, Evans, Smith, Archer, Gann, Sr., McCaskill and Wolfermann. Also President Barlow, President-elect Rhinehart, Secretary Bathurst, Past Presidents Norwood, Ellis, Wootton and Cothern, Attorney Deisch.

Resolutions presented by the Committee on Health and Public Instruction were discussed and their recommendations were approved.

On motion of Dr. Wolfermann, who read the report, the same was adopted.

NOTE:—Following adjournment of the General Session, Thursday, April 23, 1931, The Council met and re-elected Dr. Dewell Gann, Sr., Chairman, and S. J. Wolfermann, Secretary. The Chairman appointed H. T. Smith, M. E. McCaskill and Wm. R. Bathurst a committee to confer with the State Health Officer in reference to a report of Dr. Mahony, Chairman, Committee on Health and Public Instruction.

Dr. H. T. Smith: I move that the incoming president appoint a committee to work out a plan of cooperation between the Arkansas Medical Society and our State Health Department.

Seconded.

Dr. Snodgrass: The Council is the judicial body of the Society, and it seems to me to be the proper thing to refer this matter to the Council. It is their duty to settle all internal strife and disturbances in the medical society. It is a representative body of men from the Society and they ought to be big enough to settle this satisfactory to all.

The President: I think Dr. Snodgrass is right. Will Dr. Smith withdraw his motion?

Dr. Smith: If satisfactory to the Council, I will withdraw the motion.

The President: What about it, Mr. Chairman of the Council?

Dr. Gann: I accept the withdrawal.

The Secretary: We will not have a meeting of the Council for probably six months, unless you call a meeting immediately after this meeting to appoint some one to see the State Health Officer and eliminate these objections that are coming in fast and furious. I think it would be in order to call a meeting of the Council immediately following this session.

The President: I think the Council should do that immediately and act upon it.

Dr. Gann: If there is no objection, the Council will meet immediately after the meeting to transact such business as may come before it.

Dr. Parmley: I would like to state that at the last meeting of the Legislature some bills were introduced by the State Public Health office that we didn't know anything about until they were introduced. I think, inasmuch as the State Health Department is really a branch of this Society or the offspring of this Society, that they should be asked to submit what bills they want to introduce to the legislative committee, if not to the Society as a whole, for their approval or disapproval. One bill came up regarding a half per cent increase in the tax on insurance. That brought about a little disturbance among the profession and it embarrassed other legislation and the preventing of other legislation we had to deal with, because there were two forces working from different angles and at cross purposes.

We as the legislative committee were forced to endorse that bill because it was a public health office proposition. The insurance companies wrote their medical examiners all over the State, and wired them in many instances, asking them to defeat that bill. At the same time it was our bill because it was a public health service bill. One senator had fifteen telegrams one morning against that bill from doctors that belonged to this Society. If that didn't create a disturbance, I would like to know what could. And there was considerable trouble to get that straightened out. It was unnecessary work for the legislative committee. I think the medical school legislation, medical society legislation and public health service legislation should be submitted to the legislative committee of this Society and let them pass on it and decide whether we want to work very hard for it. It will certainly simplify matters for your next legislative committee. (Applause.)

The President: Any new business?

Mr. Deisch: I think it would serve a good purpose for the President or Secretary to send a letter to all members of the General Assembly thanking them for the consideration with which they met your proposals. The members of your legislative committee were given every courtesy, even by those who couldn't see your proposition the way you wanted them to, but they were given every attention and every consideration without exception and I believe they would appreciate a letter from you thanking them for their efforts.

Dr. McCaskill: I move that such a letter suggested by Mr. Deisch be written by the Secretary to each member of the recent Legislature.

Carried.

Dr. Archer, DeQueen: I would like to introduce the following resolution:

"Be it resolved that the By-Laws of this Society be amended to include all ex-presidents as active delegates and that they may be allowed to vote on all questions except the election of officers."

Dr. Snodgrass: That will have to lay over and be voted at the next annual meeting.

The President: Yes.

Dr. Gordon Hastings: As a representative of the State Board of Health, I would like to apologize to this body for Dr. Garrison's absence. He is at this time attending a meeting of the provincial State Board of Health Officers of North and South America in Washington, of which he is President. I bring his apologies. I would like to pledge the support and active cooperation of the department in arriving at any satisfactory agreement whereby the profession and the department can work in harmony. I think in communities where there is not harmony, it is due to some things that can be ironed out.

The President: If there is nothing else, I will appoint a "Liaison Committee" on Medical School and Medical Society. Dr. Snodgrass made my speech. I will appoint the Council as the committee to take charge of this investigation. As the doctor said, I think they are the ones that should do it. I believe they are a bunch of good capable men. It will save this Society probably four or five hundred dollars of expense because they have to meet from time to time and if we should appoint a new committee it would perhaps be no better and we would have an extra expense.

The Secretary: My name is included on that committee. I would like to be relieved of this responsibility. I am a member of the faculty and naturally would favor the school. If you don't mind, I would like to be relieved.

Dr. Parmley: Dr. Bathurst understands the legislative proposition perhaps better than anybody else that I know of, and that is what this is. This is not to run the medical school. My talk the other morning didn't propose that at all, but to find out whether this Society wants to endorse it. That's all you have to do and we have got to get behind the medical school or at least get the appropriation it deserves. And if this Council comes back at the next session and tell us we ought to get behind the medical school and approve of it, then it is up to us to see that they get the money to run it, and if there are any suggestions they want to make, if the faculty of the medical school will accept it, and I don't see any reason why they shouldn't. I think your committee will serve this purpose exceptionally well.

The President: What about Dr. Bathurst?

Dr. Parmley: I want to see him stay on it.

The Secretary: I insist on being relieved.

Dr. Gann: Whenever you get into a fight, I always get interested. I feel Dr. Bathurst is a loyal member. Arkansas has come to the point of organized medicine or cults. If organized medicine is bigger than cults, we will survive and if not they will put us under. I want to make a motion that Dr. Bathurst, in courtesy to him and for the reason that he is on the faculty, be excused from this committee. I think it is only fair to him and he should be relieved.

Dr. Snodgrass: My reason for having a medical college committee was not to investigate the college but to get aid for the college. As far as I am concerned, I am satisfied with it so far but what can we do in the future? If we can furnish them with any aid, we should be glad to do it.

The President: You are quite right.

Dr. Cothern: In bringing the matter before the House of Delegates, I hope I made myself plain that I wasn't an enemy of the school, but a friend to it, and I want to see the school get the help it is entitled to and should have, and it hasn't had it for the last twenty years. There is a reason and let's find the reason. We haven't any fight against the faculty of the school because they are doing the best they can, but they must have something to do it with.

The President: Is there a second to Dr. Gann's motion.

Seconded.

The Secretary: I would like to change the wording a little bit that "no member of this medical committee shall be a member of the faculty of the medical school."

The President: Do you stand for that amendment?

Dr. Gann: Do you object to working on this committee, Dr. Rhinehart?

Dr. Rhinehart: It doesn't make any difference to me.

The motion to let Dr. Bathurst off the committee, being put, failed to carry.

Dr. Snodgrass: I don't want Dr. Bathurst to think we are trying to rub something in on him but he is the most important man on that committee. It isn't a question of overworking him, but of helping the school, and I don't think he would run away.

The President: He is an ex-officio member of this Council anyway.

On motion, the House of Delegates adjourned.

GENERAL SESSION

The General Session was called to order at 7:30 o'clock p. m., Tuesday, April 21, 1931, by Dr. Barlow, President.

Invocation by Rev. F. E. Maddox of the First Christian Church:

We rejoice, O Lord, on this happy occasion which has brought us together at this time and place. We thank Thee for the high purpose back of this gathering, for the gracious opportunities for association and fellowship. We thank Thee for this fine body of men, whose great work it is to relieve suffering and preserve the health of our communities. We thank Thee for their stability, their fidelity, for their skill and their philanthropy, and we ask that Thy blessing rest upon all who take part in the program tonight, and upon the deliberations of this convention, and may great good come not only to those of us who live here, but to all who take any part in this hour. We ask it in Christ's name. Amen!

ADDRESS OF WELCOME FOR TEXARKANA

By Hon. S. C. Nancarrow

Mayor of Texarkana, Ark.

Mr. Chairman, Ladies and Gentlemen: We in this age are very fortunate to be living at this time, when the medical profession has done so much for the relief of the ills and sufferings of humanity. Although they still claim some of the ancient system, they differ somewhat in their method of applying it. Not any longer ago than the 18th century and down in the early part of the 19th, bleeding was one of the popular methods of treating many of the ailments. While still employing the system, they change the method. It used to be some argument among the doctors of that day as to the proper place to bleed for the various ailments, but in these modern times they have seemed to have reached an unanimous opinion as to the proper time and place. In those days the operation used to be performed with a knife or some kind of a lance. Today the operation is performed with a pen or typewriter and the most popular time for performing the operation is around the first of the month. The pocket nerve is where they generally apply the instrument.

In ancient times the Babylonians had no regular physician who visited the sick, but the latter were exposed upon the streets and were interrogated by those who passed and if any of them had recovered from a similar disease they were expected to state as to the methods by which they had been cured. But in general, in ancient times, the medical profession, such as it was, was shrouded in mistery and magic. The physician in those days was priest, philosopher and scribe and, therefore, could not specialize on any one thing.

The medical profession has made wonderful progress since the days of Hippocrates, called the Father of Medicine, and some 700 years later Hillel, whose writings dominated the profession for over a thousand years. But today the physician is accurately trained. He must not only know his subject and know it well, but he must be a man of culture, wide learning and keen understanding.

Now, as the representative of this community it is my privilege and pleasure to extend a hearty and cordial welcome to this gathering of one of the greatest benefactors of the human race, and we trust that you will derive so much pleasure and benefit from your visit that you will each and every one of you be anxious for an early return.

You are in Texas. I belong in Arkansas. If any of you get in any trouble while here, I just suggest that you walk across the street over there because I couldn't do anything for you on this side of the line. (Laughter).

We extend to you a hearty and cordial welcome to our city and hope you may be back here many times. I thank you. (Applause).

ADDRESS OF WELCOME FOR THE MILLER COUNTY MEDICAL SOCIETY

A. G. LEE, M. D., Texarkana

Mr. President, Guests and Fellow Members of the Arkansas Medical Society: On behalf of the Miller County Medical Society we extend to you a cordial welcome. If I left this unsaid I would be doing an injustice to the Bowie County Medical Society, our twin sister. Here in Texarkana we are one society. Organized medicine knows no State lines.

The next time you meet here in Texarkana we will have erected, a few blocks up State line, a two million dollar building that will house the federal government's affairs on the Arkansas side and on the Texas side.

There is a peculiar personal significance to this occasion tonight, in that the Arkansas Medical Society is holding its 56th Annual Convention; the Arkansas Medical Society and your humble speaker were born the same year, and for a quarter of a century she has extended to me a gratifying welcome before I had the opportunity in this address to return the courtesy.

It seems to me it would be unbecoming to us doctors to present an appearance beyond the circumstances of today. We are confronted with times that are hard and we should not make a false presentation. I saw a friend from up in Lonoke County, I can't think of his name, but a man of good appearance, a good imitation of a million dollars. But you can't fool the public. He couldn't hide that wobble in his walk and, looking at his waist-band, at the impressions on the leather buckle, he wore this for two seasons. The impression on the leather indicated about a four

inch take-up. He had to put in extra holes in order to take up the slack, and hold up his pants.

We desire to have a good friendly, homelike, humble meeting, where everybody is welcome, where they will enjoy themselves and not feel uncomfortable.

We have with us tonight the ladies. At the General Sessions of the Society in the early days there was not a lady in the hall, but tonight we have them with us, and we are glad to have them with us. They can display features of great interest to us, and we welcome them. I remember when I was a boy long, long ago, in the old country school house, the teacher tried to keep us segregated except in class. He had the benches arranged so that the boys were in the rear. In those days the girls wore longer dresses than they do now, and he had to change that arrangement, on account of lack of attention on the part of the boys. In all walks of life today we are seeing more of the ladies (laughter) and we are glad to have them with us.

It is more difficult for me to give this address here tonight than before a meeting in Little Rock or Hot Springs, the home of this Society. There it would be just a big, old gathering of home folks; in the old home, there would be mother and father, Mother Gann and Father Bathurst, who are always glad to have us come and spend the day. But here it is different. The geographical situation of Texarkana requires me to welcome our friends from Oklahoma, Louisiana and Texas, Oklahoma, the State of "Alfalfa Bill," the blind Senator, and one of God's greatest blessings to Arkansas, Will Rogers (Applause), who came to us, not like the Red Cross, not like a Congressional appropriation, designating the method of applying their relief, but who came as an Angel of Mercy in time of need voluntarily and of his own accord. We have with us friends from Huey Long's State, but they tell me that some of Huey Long's cousins won't be here tonight, the fertile State of Louisiana where a blade of grass grows longer in a single night than it would in a whole Canadian season. We have for these friends of ours tonight provided an abundance of pot likker and corn dumplings. Don't misunderstand me. I didn't say corn likker and pot dumplings.

Now we have some good neighbors in the State of Texas we must welcome, the Lone Star State, the State of the Alamo, Crockett, Houston, Ma Ferguson, etc. A good neighbor doesn't need much welcome. They will get coffee over the back fence for breakfast if it is roasted, and we have an abundance of roasted coffee for you Texas gentlemen.

We feel like Arkansas is under a considerable obligation to you, and if there are any here tonight we welcome all of you.

Now, before leaving here we want you all to thank our distinguished guests for coming here in response to our request and imparting to us their extensive knowledge and experience in matters pertaining to medicine. Then promise the Bowie and Miller County Medical Societies that when you go home see those that are absent tonight, if any of them were sick, if any of their loved ones were sick and they couldn't come, and tell them how we miss them, tell them how we sympathize with them and that we pray that they will soon be restored to their good health.

There are some absent tonight for whose absence our hearts ache. There are some for whom we are bowed in sorrow and grief, but it seems to me there is the consolation that one of these days, some sweet day, we are going to have a final meeting, a great reuniting, under the Divine chairmanship of that great Physician, and we will hear the roll call, we will receive our rewards for our consecration and devotion to the alleviation of human suffering. We will meet them again; we will see them face to face; we will hear them welcome us forever more.

Again, I extend to you all a hearty welcome.

RESPONSE TO THE ADDRESS OF WELCOME ON BEHALF OF THE ARKANSAS MEDICAL SOCIETY

W. W. Verser, M. D., Harrisburg

Mr. Chairman, Ladies and Gentlemen and Members of the Arkansas Medical Society: After arriving in your beautiful city this morning, and being met by Dr. Kosminsky, the chairman of your entertainment committee, and after hearing these wonderful addresses in behalf of Texarkana and the Miller County Medical Society, it reminds me of a story I once read that occurred in one of our northern States in the pioneer days where John and Mary lived in the backwoods. They were reared together, went to the same school, belonged to the same church and they finally became engaged to be married. Their friends and relatives gathered around the log cabin that John had built and Mary had so nicely helped to furnish and, after the ceremony was over, and a few of the guests still sitting around the log heap, John and Mary climbed the ladder which led to the upper story. After John got up there, he looked around at the beautiful furnishings that Mary had fixed for their future comfort and happiness. John stuck his head out the door and said, "You may take the ladder away. I am not coming down any more." I don't know if Dr. Lee might have been, as far as I know, John.

But, anyhow we certainly appreciate having had the opportunity to meet here at Texarkana, and it makes us think we would like to send a telegram home that we are not coming home, that we are going to stay in Texarkana. Of all the development of Arkansas in its resources and beautiful towns and country, we feel that the development of the medical profession is the sheet anchor of civilization and we as the medical profession have assembled ourselves here in your town to discuss vital problems of health and disease, and with the help of you good people of Texarkana and the program committee of the Arkansas Medical Society, we feel that the 56th annual meeting of the Society will far surpass any of the former meetings. We feel that the people of Texarkana wouldn't be so selfish as to want us to hold all our meetings here, but we do hope that in the not too far distant future we will have the opportunity again to partake of your hospitality. And this reminds me of another little story where a young man said to his sweetheart, "Let me kiss those tears away," to which she very agreeably consented and, after he had been so busily engaged for a few minutes, he said to her again, "Sweetheart, is there no way to stop those tears." She said, "No. It's hay fever, but just continue your treatment."

So, I want to say to the people of Texarkana, just continue your treatment." (Applause).

PRESIDENT'S ADDRESS

E. E. Barlow, M. D., Dermott

Mr. President Members of the Arkansas Medical Society, Ladies and Guests:

In responding to the call of custom which demands of your President an address on some subject germane to the profession of medicine, I confess to an overwhelming timidity. Though a humble worker of the ranks, I stand now in the place which has often been filled by men whose resplendent qualities have blazoned their reputations beyond the confines of their own State. My feet are on hallowed ground as I stand before this magnificent assemblage which is representative of our highest manhood. Through no merit of my own have you so indulgently honored me. Love of my profession, loyalty to its highest teachings, devotion to its interests through the channels of organization, and a high sense of moral obligation are my sole claim and my grateful answer to the confidence you have placed in me. I have labored to the best of my ability to keep in close touch with every interest of the association, and to make this meeting successful and profitable.

We come together with our common experiences, and in the interchange of thought and theory there is keen stimulus for study and research. We are deeper, fuller men after such associations. We relate our successes and acknowledge our defeats. Defeat and success are closely blended. Life is not an experience of unalloyed joy and triumph. True success is secured through obstacles, seeming failures and unfulfilled aspirations. Those almost insurmountable obstacles, are but "Stepping Stones to higher things." The social relation of these meetings is helpful and strengthening. We become better acquainted with one another. Here is fostered and nurtured a spirit of unity and peace in the bonds of common brotherhood. This social concord teaches an ethical morality which gives character and integrity to our noble profession. And there is in our mingling a sense of recreative pleasure which we are the better for enjoying. We go back to our labors with stronger resolve, renewed interest, and are better and wiser men for having come together.

If "all the world is a stage and all the men and women players thereon, in a drama of mixed comedy and tragedy," let each of us strive to be, not like Macbeth, "A poor player that struts and frets his hour upon the stage and then is heard no more." The true keynote of Life's Drama is "Act well thy part, there all the honor lies," for "We live in deeds, not years; in thoughts, not breaths; in feelings, not in figures on a dial." "He most lives who thinks most, feels the noblest, acts the best." Greatness is not in the circumstances, but in the man. The greatest men have been great, not because they were mighty in intellect, but because they were great in soul. Ours is a calling of self-sacrifice and service. To you who have read the Bonnie Brier Bush there is no more composite picture of true professional service and the true professional gentleman than is illustrated in the life and ministry of Dr. William McClure, a physician of the "Old School." So beautiful is the author's rendition of this historic character that his unselfish labors, his deep personal sacrifices, challenge our admiration and appeal to our latent virtues to arouse the good in us and give us the spirit of his zeal. In the characterization of this strong personality we have a conception of the brotherhood of man beautifully expressed in the life and ministry of the Man of Galilee. Every profession has its heroic characters, men of vision, men of heart, and to such the world is indebted in measure far beyond its appreciation and requitement. Indeed it would sometimes seem that these noble and illumined lives who do most and give most, do not live in the sunshine of the world's favor.

They do not receive the applause of men, nor yet do they seek to wrest by their earnest labors and high attainments the perishable wreath of the world's green bays; they covet not stations of brief authority and power to strut with fuss and feathers; neither do they seek to amass wealth that pampers the pride of life yet does not enrich; but fed by the diviner virtues, they are content in the moral consciousness of duty done, and having as their reward the inspiration of doing good and seeing others happy and blest through their earnest, self-sacrificing labors. The physician should be a representative man in his community—a man so careful of his honor that he will maintain that strict probity of character that not only invites and receives, but retains under all circumstances the highest respect, the deepest confidence and esteem of all with whom he comes in contact.

"The flowering of civilization is the finished man, the man of sense, of grace, of accomplishment—the Gentleman. The essence of gentlemanliness is self rule. That means a character which possesses itself, a force which governs itself, a soul which respects itself. The gentleman then is—Master of Himself."

If we respect our profession as we ought, we will respect all honorable practitioners in this honored calling. And respecting them and ourselves, we will beware of all degrading jealousies and despise every unfair art which may promise to raise us at the expense of a rival. How hard it is not to undervalue those who are hotly competing with us for the prizes of life. In every great crisis our instincts are apt suddenly to rise upon us, and in these exciting struggles we are liable to be seized by that passion which led the fiery race-horse, in the height of a desperate contest, to catch his rival with his teeth as he passed, and hold him back from the goal by which a few strides would have borne him. But for the condemnation of this sin I recommend the tenth commandment, which, in its last general clause, unquestionably contains this special rule for physicians—"Thou shalt not covet thy neighbor's patients."

I love the profession of medicine; I love the traditions that come down to us through years of its honorable past; I revere the great and noble men who have left the impress of glorious personality and example on its history, and may not we, mindful of their heroic struggle and self-sacrificing labors, catch the spirit of their inspiration and dedicate ourselves to the great ministry of healing? Fellows of the Arkansas Medical Society, I may hold rather a too exalted standard for members of the medical profession in an age so deeply tinctured with materialism and when selfish interest is so strongly accentuated, but I cherish the hope that a profession that comes so close in its ministry to the afflictions and sorrows of the human family will beget in us as its representatives a deep, true, consecration in our sacrament of service to our fellow-man. May it be said truly of each one of us, "He has done the work of a true man, crown him, honor him, love him."

On motion, the General Session adjourned.

GENERAL SESSION

Thursday, April 23, 1931

The General Session was called to order.

Dr. Snodgrass read the report of the Reference Committee.

Mr. President and Members of the Arkansas Medical Society:

We, the Reference Committee have gone through the mass of written reports submitted to us.

We heartily commend the Committees for their work. Some of these reports deserve more than mere formal recognition. The council has been very energetic in their efforts to investigate the needs of the members of this Society. Particularly in helping doctors to aid the indigent sick and obtaining aid for the doctors of their communities. We also wish to commend the council in their efforts in upholding the high ethical standards of our profession regarding internal strife and in settling disturbances in our society. We hope they will be able to cement the members of this society for the betterment of all.

We wish to acknowledge the report of our delegates to the meeting of the American Medical Association. Keeping us in touch with that body and in bringing back their ideas to us.

We appreciate the report of the Committees on Hospitals. It gives us some knowledge of the vast influences hospitals have and are going to have on our profession.

The report from State Board of Medical Examiners created and endorsed by our Society, we heartily commend their work, and the harmony in which they cooperated with the Basic Science Board.

We wish to acknowledge the paper on Foods and Fads, recognizing the vital interest this should be to every physician and that we all should give this subject more serious thought.

We acknowledge and endorse the recommendations of the Committee on Malarial Control. Referring this back to you for further consideration. We hope this good work can be continued and properly done by persons competent to do such work.

We particularly endorse the letter thanking all who participated in the great work of aiding the helpless. Especially the United Drug Co. for their aid in filling all prescriptions requested by doctors for indigent patients.

We wish to approve the work of the Legislative Committee and thank everyone who aided in this work, especially thanking Hon. Peter A. Deisch.

We wish to thank Dr. F. O. Mahony and his committee on Public Health and Instructions. The report is of most vital interest to every doctor in Arkansas. We hope this report can be placed in the hands of every citizen of the State, and be given fair and impartial consideration, and all questions involved settled to the best interests of all.

We wish to commend our retiring President on his year of administration. Thanking him for the fine address given us. We wish to thank every member of various committees on the arrangements and those who participated in the success of this meeting in Texarkana at this time, particularly the Program Committee as we think this one of the most pleasant and profit-

able meetings of this Society in its life of 56 years.

J. A. FOLTZ,
W. A. SNODGRASS,
J. O. RUSH,

Dr. Scott: I move that the committee's report be received and approved.

Carried.

Dr. Snodgrass: I would like to have Dr. Mahony's report referred to the Council for general consideration. I make that as a motion.

Carried.

Adjourned.

GENERAL SESSION

Last Day

The General Session was called to order by the President immediately after the adjournment of the House of Delegates.

Dr. Rhinehart on the platform.

The President: This is Dr. D. A. Rhinehart who will now take the gavel and I hope this organization will be as loyal to him and cooperate with him in the same way that you have me, because whatever success this meeting has had has been through the cooperation of this honorable body. Dr. Rhinehart is not only eligible, he is one of the most capable men in Arkansas for this position and I now present him the gavel. (Applause).

Dr. Rhinehart: Dr. Barlow and gentlemen of the Arkansas Medical Society: It is, I hope, with a suitable degree of humility and a sense of inferiority that I accept from Dr. Barlow the gavel, symbolic of the efforts of a long line of illustrious presidents of the Arkansas Medical Society who have preceded me. I shall try to the very best of my ability to make you a good president. During the past year I have put my business affairs in such shape, I think, that I can respond to almost any call on my time that you may care to make. It is my wish that I be permitted to visit you in your county society meetings and consult with you with reference to your professional and society problems. I wouldn't be averse to accepting invitations to civic clubs and carrying a message to them from the medical profession. With your assistance, I feel that the coming year will be an important one in the history of the Arkansas Medical Society. It becomes my pleasure and my privilege, as the first official act of my administration, to you the president-elect of the Arkansas Medical Society. I would like to appoint Dr. Rhinehart and Dr. Phillips a committee of two to conduct Dr. Will H. Mock to the platform. (Loud applause).

Dr. Mock: Gentlemen, I wish to assure you that this is one of the greatest and most wonderful surprises of my life. You know this is one time in my life when my heart seems gladder and my lips speak the least. Words are really inadequate to express my appreciation for this wonderful honor you have conferred upon me, and I will just say that I will endeavor to show my deep gratitude and appreciation through my efforts for organized medicine. (Applause).

The President: The next order of business is the filling of vacancies on the State Board of Medical Examiners. The delegates have been asked to meet from the different districts and select three names.

The following names were selected:

First District: W. W. Verser, Harrisburg. J. O. Rush, Forrest City. J. B. Ellis, Helena.

Fourth District: T. F. Kittrell, Texarkana. J. W. Hawkins, Mena. W. W. York, Ashdown.

Fifth District: W. A. Snodgrass, Little Rock. M. E. McCaskill, Little Rock. W. R. Reves, Alma.

Dr. Snodgrass: I move that we accept the names selected.

Carried.

The President: Next is the selection of the next meeting place.

Dr. Hinkle: It gives me a great deal of pleasure to extend the invitation of the Pulaski County Medical Society of Little Rock to meet with us next year. I want to impress upon you that this invitation is perfectly unanimous, that every loyal member of the Pulaski County Medical Society earnestly desires at this particular time to have the meeting there. It would be rather difficult to us to pay to Dr. Rhinehart as the president of the Society any more compliments than have already been handed to him. Little Rock thoroughly appreciates the honor extended to him and to our society through him. We want to show you our appreciation of the honor you have extended us through him of giving you the best possible program in every way that you would like to have at your State meeting. There seems to

be a little bit of misunderstanding as to what the Pulaski County Medical Society intends to put out. It isn't the desire of the Pulaski County Medical Society to make a clinical congress of the State Society. It is to make it just exactly as it has always been, of extending ourselves a little further than we have gone, to get the very best of material, in order that you may be instructed in the things you are interested in and to extend ourselves a little bit further in entertaining the personnel and members of your families and guests you bring with you. This invitation doesn't come from the Pulaski County Medical Society alone, as I have a written invitation of the Little Rock Chamber of Commerce, all the hospitals in Little Rock, the medical school and the citizenship in general, who are anxious for you to meet with us next year. I hope and trust that there will be a unanimous vote of this society that we go to Little Rock next year (Applause).

Dr. Ellis: I move that we accept Dr. Hinkle's invitation.

Seconded.

Dr. Clark, Pine Bluff: Pine Bluff would be delighted to have the honor of entertaining the Society. It has been almost a quarter of a century since we had that honor. I am quite sure if we had the opportunity again we would do everything in our power to make it interesting and entertain you to the best of our ability. I would be pleased to read a telegram and be glad to have you consider us for the next meeting.

Arkansas Medical Society, Texarkana.

Jefferson County Medical Society extends invitation to you to hold the next meeting, 1932, with us with headquarters at Hotel Pines.

J. F. Gill, President,

J. T. Cunningham, Secretary.

Dr. DeBolt, Monticello: I have some instructions to discharge along this line. Last year in the absence of the delegate it fell to my lot to extend the invitation of Drew County Medical Society. I come before you this afternoon charged with those same instructions, which I would like to carry out. On behalf of the Drew County Medical Society, our civic bodies, the mayor of Monticello and the citizenship, I again extend the invitation to hold your meeting in the little city of Monticello. We are in an humble minority, but we have unity there. And should you decide to come to Monticello, you will have no occasion to regret your decision.

Dr. Wootton: Hot Springs takes great pleasure in seconding Dr. Ellis' motion that we meet in Little Rock.

Dr. Moore: When I was elected a delegate to this Society from Union County, I had instructions to invite you to meet with us in 1932. We took care of the meeting in 1928, I believe it was, and tried to entertain the Society and I think we entertained you as well as you have ever been entertained. We have all hotel facilities, have concrete roads in every direction, two bridges across the Ouachita River from the east, and I think the doctors could come there in their cars any time they wanted to come, but I am going contrary to my instructions. I am going to second the motion to meet in Little Rock. I think it ought to go there, as you are the next president. (Applause.)

A ballot having been taken on the place of meeting, Little Rock was chosen on the first ballot.

Dr. Gann, Sr.: I move that we express our appreciation and thanks to the Miller and Bowie County Medical Societies and to the citizens of Texarkana for our entertainment.

Carried.

On motion, the convention adjourned sine die.

MEMORIAL SESSION

Baptist Church

Wednesday, April 22, 8:30 to 9:30 A. M.

The Memorial Session was called to order by Dr. E. E. Barlow, President.

LIST OF DECEASED MEMBERS

Austin L. Bowers, Keo, June 18, 1930.

Luther Hinton Stout, Brinkley, June 29, 1930.

Martin Johnston Barlow, North Little Rock, July 1, 1930.

William Ridley Lee, Mineral Springs, July 13, 1930.

C. S. Miller, Hot Springs, July 23, 1930.

James Phillip Lunt, Rector, August 14, 1930.

Cowley S. Pettus, Little Rock, August 17, 1930.

Horace Oliver Wilson, Rison, September 4, 1930.

Enoch Taylor Jones, Hampton, October 1, 1930.

Martin C. Burnett, Wooster, November 30, 1930.

John W. Bean, Marvell, December 28, 1930.

John Thomas Hunn, Harrisburg, January 3, 1931.

Charles Eugene Swift, Elkins, January 10, 1931.

Joseph Phineas Runyan, Little Rock, February 2, 1931.

Nettie Klein, Texarkana, February 5, 1931.

Luther Hayes Callen, February 25, 1931.

John Simpson Cannon, West Fork, February 27, 1931.

Frank Lawrence Castleberry, Jonesboro, March 11, 1931.

Harry C. King, Fort Smith, March 11, 1931.

Daniel Edward Drennen, Hot Springs, April 3, 1931.

John H. Kinsworthy, Little Rock, April 4, 1931.

Isaac A. Ryan, Fort Smith, April, 9, 1931.

S. A. Turner, Heber Springs, April 10, 1931.

R. H. T. Mann, Texarkana, April 17, 1931.

Song of Consolation (Cole)—Cozia Hynson Case.

Invocation by Rev. M. T. Andrews, Pastor of First Baptist Church:

Holy Father, Father of our Lord Jesus Christ, Giver of life and every needed blessing, we adore Thee this morning. We would love and praise Thy matchless Name for all of Thy mercies to the children of men. We thank thee this morning for the bright and beautiful weather. We thank Thee for the coming of this group of people to our city who, like the great Physician of the other days, seek to heal the hurts of humanity. May their presence with us be pleasant and their conference issues in profit to all of them in their profession to serve humanity. Forgive us this morning of all of our sins. Bless, we pray Thee, the memory of these comrades who have fallen through the years of service. We pray Thee to watch over their loved ones. Lend comfort to the remembrances of the services that have been rendered and the friends fast and true which they have made. Let Thy blessing abide upon the interest of this conference and grant that it may issue in added blessing and in larger vision, in a strong grasp, in the conquering of the fight against the enemies of man's body. And grant us, Heavenly Father, that all of these men and women shall be blessed by the contracts they make here, by the services which they render and by the fellowships which will be sweetened and chastened with the years. Guide them throughout the days. This we ask with the forgiveness of our sins in the name of the Great Physician. Amen.

Quartette:

Hymn: O Paradise, O Paradise.

God Shall Wipe Away All Tears (Fields).

The President: At this time I want to introduce Dr. G. A. Warren, of Black Rock, chairman of the Section on Necrology, who will take charge of these services.

Dr. Warren: Members of the Arkansas Medical Society, Friends, Members of the Ladies Auxiliary and their Friends:

This is not the first nor the second time that I have been given this duty, a sad duty, to comment upon our departed members. This is especially sad from the fact that one of the members who has left our ranks during the past year was chairman of this committee and I was asked to take his place. Five years ago he was chairman of this committee and the services that he rendered at that time were a little more elaborate and, as I thought, just a little more fitting than probably any services of a similar kind we had rendered on occasions of this kind. So I say to you that it is especially sad today that we have to enumerate him among those whose names we shall call in these services.

We have come to do honor in a meager way to the departed of our members, those who have gone before, and gone so far as I know and believe to reap their reward. I am sure that many of them, in fact most of them, never get their reward here. They died or the most of them died martyrs for suffering humanity. Why do I say this? Because a martyr is one who gives his life for a cause or a principal, and few doctors live who do not become so engrossed in doing good to his fellowman, in relieving suffering humanity that he forgets or wholly disregards the "first law of Nature," self-preservation. There are a few physicians who are making financial gain their first and main consideration, but there are very few. A real physician forgets self and even his obligation to his family or loved ones and thinks first of the well-being of his patients.

In 1909 I had a friend whom I knew to be dying of pneumonia. I had promised to be at his bedside. I was in court and it was late at night when I got to the river and I couldn't rouse the ferryman. He lived on the hill be-

yond. I thought that I ought to turn back but I didn't. I was on horseback. There was a ford below there. The river was up but I thought I could drive my horse through. I crossed that river when I couldn't see the water, it was so dark, and all the way I knew that my feet were in the water and to draw them up was by feeling the water run into my shoes. Friends, I didn't think of self, but I wouldn't do that again today for ten thousand dollars. It was just as certain death had I gone over the shoals, as if I had gone into an abyss. I have thought of it thousands of times since. But my object was to relieve my suffering friend. Again at this same place to attend an obstetrical case, I crossed on the ice above the ford. I dared not ride my horse on the ice, but led him cross thinking that if he went in I would escape. These are instances that can be paralleled in the life of most any physician.

It was my pleasure this last Fall to visit Harrison, the home of my departed friend, Leonidas Kirby. Another name more fitting would be "lovable Kirby." In last week's paper there was quite a write-up and those of you who missed it, if any of you did, missed the biography of a man who it would be well to follow, Dr. Kirby. While in Harrison, I went to a flower shop and I got a wreath and took it to the grave. I got Dr. Frank Kirby, his son, who lives in Harrison, to go with me. I deposited that wreath and I said, "God bless you." Could I but live to be as honored, to be as much loved, as was this man, my greatest ambition would be reached. Now, friends, excuse me, but this man, while he is a little better, probably a little more of the real physician than most of us, yet there are many who could be classed with Leonidas Kirby in a meager way. Among those I must recount are the following:

First, Dr. Runyan. Had he lived today he would have been the second oldest living ex-president. He has gone. He came into this Society in 1892, and with a few exceptions has attended all meetings. He was secretary for some years; he was president; he was always willing to give his time, his money and his counsel to organized medicine and for the good of humanity.

Another man was the chairman of this committee, Dr. C. S. Pettus, who came to this State from Mississippi, first to El Dorado, and from there moved to Little Rock and he, too, was a dear and close friend of mine.

Another man who you all know, who was our president two years ago, was Dr. Mann of this place. For 25 years, I will say, Dr. Mann hasn't missed a meeting of the Society, and two years ago he was our honored president.

Friends, these men have been avowed leaders of our cause. To not only these but to all the others we owe a debt of gratitude and should honor their names as best we can.

There are about twenty-five that have passed away the past year. The number is appalling, greater than it has been for years, so far as I can remember. So that it looks as though our ranks are rapidly diminishing. It is entirely too great.

One week ago last night I saw Dr. Baxter, son of ex-governor Baxter. He was in the medical society meeting in Batesville. He is an old man, very frail. The same writer who wrote up Dr. Kirby's life as a country physician wrote Dr. Baxter's life, and in that writeup he said that Dr. Baxter had on his books over $35,000 of uncollected and uncollectible accounts. Dr. Baxter today is doing what he can to make a living, though he is past 75 with one foot almost in the grave. He has no money. He has given his life to suffering humanity. And many others are doing the same thing.

Dr. Garrison told me in February that there were five hundred doctors in Arkansas today who didn't have money to buy gasoline for their automobiles to make their trips and were trying to borrow it if they could, failing in many instances, thereby making themselves dependent on Red Cross charity or on the local charities. Friends, that is a sad, sad comment and yet it is true.

Again, I want to say to you that we should have the deepest feeling of gratitude for these men who have given their lives for suffering humanity. This attendance here is not what it should be, although I want to say to you that it is better than it has been for several years. I want to thank you. You will now listen to Mrs. Fly, chairman of the Auxiliary.

REPRESENTING THE AUXILIARY

Mrs. T. M. Fly, Little Rock

Friends:

We have come together on this solemn occasion for the privilege of paying a last tribute of love and respect to those of our members who have "crossed the bar" during the past year. To paraphrase the immortal Gettysburg address, "The world will little note nor long remember what we say here, but we shall not forget what they have done. It is for us, the living, rather, to be dedicated to the unfinished work which they have thus far advanced."

We miss, and shall continue to miss, these faces from our ranks; and to their families, and also to the families of the departed doctors, and to their respective organizations, we extend our heartfelt sympathy.

We regret to report the deaths of five of our valued members:

Dr. Nettie Klein of this city (an honorary member) who passed away in February, 1930.

Mrs. Patterson, wife of Dr. R. J. Patterson of Little Rock who died July 24, 1930.

Mrs. Hardeman, associate member, widow of the late Dr. D. R. Hardeman of Little Rock, July 26, 1930.

Mrs. Beck, wife of Dr. J. W. Beck of Bowie Miller County Society, passed away in August, 1930.

The President: There is the suggestion of the committee that this floral tribute be placed on the grave of Dr. Mann.

Dr. Warren: Our departed ones also include the name of Dr. Nettie Klein, who was a member of this organization, one of the few lady members; she and Dr. Olive Wilson, who used to be in Paragould, were for years regular attendants of this Society. Dr. Wilson moved away; where I don't know. Dr. Klein lived here and died here this last year. There have been many other physicians over the State who have died during the past year, but who were not members of the Arkansas Medical Society.

Quartette: Song.

The President: This has been a beautiful and impressive service, made so by the local committee, Dr. Warren and members of his committee, and the Ladies Auxiliary of the Arkansas Medical Society, and last but not least those who have given us such beautiful music, and on behalf of the Arkansas Medical Society I wish to thank them or any one else who has had to do with these services. Let us stand for the benediction.

Benediction.

Obituary

GUTHREY, JOHN E.—Dr. John E. Guthrey of El Dorado, Ark., age 47, died June 6, 1931.

He had practiced medicine in Belom, Sevier County, Ark., from 1913 until 1926, and in El Dorado the last five years.

Surviving are his wife and three sons; Runyan, Truitt and Dale.

GEPHART, ROSCOE T.—Dr. R. T. Gephart of Cotton Plant died June 24, 1931. Aged 58. He was born in Edinburgh, Indiana, coming to Cotton Plant in 1905. Surviving are his wife, two sons, Dr. R. O. Gephart, dentist of Little Rock, and Brice Gephart of Cotton Plant; one sister, Mrs. Rose Prewitt; and two brothers, Cash Gephart of Columbus, Indiana, and I. C. Gephart of Dayton, Ohio.

Correspondence

LETTERS TO THE JOURNAL

Today a man came into my office and said "I have a rock in my ear." Upon looking I discovered a small rock about half the size of a pin head lying against the drum. I have removed foreign bodies from ear canals before but never so very easily as I did this. Wrapping an applicator with a small piece of cotton I dipped the tip end of the cotton into La-Page's glue. With this the foreign body was removed with absolutely no pain and quickly. Just as soon as the glue touched the little rock, adherence took place and when the cotton tipped applicator was withdrawn from the ear canal it brought with it the small rock. I report this because it might be of value to some in the future. I hope I remember my success in this case.

Truly yours,

J. H. Buckley.

June 24, 1931. Fort Smith.

County Societies

ASHLEY COUNTY

Members of the Ashley County Medical Society and guests met Wednesday, June 19, at Wilmot, a fish fry at noon being part of the entertainment.

The scientific meeting was in the afternoon, presided over by Dr. D. A. Rhinehart, President of the Arkansas Medical Society. Dr. Rhinehart delivered an address. Papers were read by Dr. J. D. Riley of Booneville, Dr. M. C. Hawkins of Little Rock and Dr. E. E. Barlow of Dermott.

Mr. Kistler of Wilmot with his Boy Scout Band, furnished music, and Mrs. Crandall of Marguerette, Mr. and Mrs. Stovall, Miss Mildred Cone, Miss Mary Spier and Mayor Larrison of Wilmot assisted in the preparation of the food.

The following physicians attended the meeting:

Drs. Rhinehart and Hawkins of Little Rock; Dr. Riley of Booneville; Dr. Barlow and son of Dermott; Drs. Wilson, DeBolt and Duckworth of Monticello; Drs. Miller and Owens of Bonita, La.; Drs. Garnier, Leauel, Billingsley and Stilee of Bastrop, La.; Dr. Poinbluff of Collingston, La.; Drs. Clark, Williams and Huckleby of Mer Rouge, La.; Mr. Stakes, a representative of the United States Health Service; Drs. W. S. Norman, J. W. Simpson, J. C. Simpson, Barnes, Mask, Easter and Gibbs of Hamburg; Drs. Crandall and Jones of Wilmot; Drs. Cone and Cochran of Portland; Drs. Hawkins and Holliday of Parkdale; Rev. W. S. Deand and Rev. W. R. Jordan of Hamburg.

Book Reviews

The Doctor and His Investments. Financial Policy and Technique for the Physician.—By Merryle Stanley Rukeyser, B. Lit. M. A., Financial Editor, Medical Economics and Dental Survey; Financial and Editorial Writer, New York American and Associated Newspapers; Associate in Journalism, Columbia University. Published by P. Blakiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, Pa.

This book will be a revelation to many who have considered the doctor's investment problems much the same as those of any other individual. It is an intimate study of the problems and conditions affecting the average physician from which a financial policy and technique has been evolved.

Contents as follows:

PART I—INVESTMENT POLICY FOR DOCTORS

Saving—the Doctor's Method of Self-Pensioning.

A Life Financial Plan for Physicians.

A Balanced Investment Diet.

The Doctor and His Bank.

What the Doctor Should Know About Investment Trusts.

Financial Diagnosticians (Investment Counsellors).

Investing Savings Through the Business Cycle.

The Need of an Annual Financial Health Examination.

How to Keep in Touch with Developments Affecting Investments.

The Promise and Woes of Speculation.

Investment Footrules.

Business Management—the Key to Investment Results.

Investment Pitfalls.

PART II—FIELDS OF INVESTMENT FOR DOCTORS

Avenues of Investment.

Should the Doctor Buy Common Stocks?

Bonds in the Doctor's Portfolio.

Preferred Stocks as Vehicles for Convenient Investment.

Convertible Bonds—Their Uses and How to Select Them.

The Physician's Insurance Needs.

Real Estate as a Nest Egg.

Should the Doctor Own His Home?

Equipping the Doctor's Office.

The Pros and Cons of Medical Arts Buildings.

The Advantages of Medical Groups.

PART III—FITTING INVESTMENTS TO THE DOCTOR'S NEEDS

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The Retiring Doctor's Investment Program.

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BASIC SCIENCE ACT CONSTITUTIONAL

The basic science act of Washington is neither unreasonable nor arbitrary nor are its requirements evidence of caprice, in the opinion of a U. S. District Court, rendered in a recent case, *Leo Verbon* v. *David C. Hall et al.* A drugless healer petitioned for an injunction, which was denied, to restrain the execution of the act, contending that its provisions violated the Constitution of the United States. To guard people against ignorance or imposition, the State has a right, the court said, to require of those who treat the sick knowledge of the structure of the human body, of the functions of the organs and parts of the human system during life and of the elementary basic sciences.

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Original Articles

RADIATION IN CARCINOMA OF THE BREAST*

IRA H. LOCKWOOD, M. D.
Kansas City, Mo.

In presenting this paper I do not wish to appear a partisan of a certain method of treatment of malignancy. Radiation is only an effective weapon in the armamentarium available for the treatment of the individual afflicted with carcinoma of the breast. It will not supplant surgery as some enthusiasts have declared, but on the contrary, is bringing about a new era in operative surgery. No one should claim it as a specific for malignant disease. It has a limited use. It has added a possible means of prolonging life. One fact stands out very clearly; no patient, however inoperable, should remain untreated.

The treatment of carcinoma by radiation therapy relies upon the selective action of irradiation on malignant cells. This selective action is due to the greater sensitivity of malignant cells to irradiation as compared to normal cells. The combination of the biological factor of selectivity with the power of penetration of gamma rays gives the possibility of treating lesions which are irremovable, either because of their situation, or because of the involvement of important structures. It enlarges the field of "treatable" cases beyond the limit imposed on purely operative surgery. (Until recently the principle underlying the treatment of carcinoma of the breast was the elimination of the growth by excision.)

Investigation of breast carcinoma, made on a large scale by the Health Committee of the League of Nations, show that marked differences in the mortality occur among people of different countries, but the reasons for these differences have not been entirely explained. Usually, but not always, some form of chronic irritation preceeds the growth. Sometimes months, and even years after the irritation has ceased the carcinoma makes its appearance.

The microbic theory is not dead; a few of the best known workers still hold to it. Then there are the advocates of an idea that an ultra-microscopic virus combined with an activating substance is necessary and sufficient to cause carcinoma. Finally there are those who look to spontaneous changes in the physiology of the cells to account for the condition. The opinion most frequently met with is that carcinoma may be produced in a number of ways and that it is a train of events acting upon a susceptible person, rather than a single causative factor which leads to the results. Obviously any break in the chain or increase in resistance would afford protection. Animal experimentation, which has yielded much information, continues to occupy a foremost place in laboratory work and tissue culture, affording as it does opportunities to study the physiology of the normal as well as the cancer cell.

The resources which are now available against carcinoma of the breast are surgery and radiation. They require the co-operation of the patient. They are efficient in proportion to:

(1) The discoverability of the carcinoma.

(2) The location of the lesion.

(3) The stage of advancement.

(4) The equipment, skill and ability which are available to diagnose and treat the case.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

Therefore the great questions of today are:

(1) How to get the individual with carcinoma of the breast who needs help to go in time to those qualified to give it.

(2) Not how, but when to employ surgery, radiation therapy, or a combination of both.

(3) How shall we combine the opinions of pathologists, surgeons, and radiologists so that our patients may benefit to the greatest possible extent.

In the first place we should recognize that the microscopic examination of excised tissue is essential for correct diagnosis and treatment.

In the examination of the patient we must observe certain facts.

(1) Is the carcinoma of the breast clearly localized; and by a localized carcinoma we mean a growth that is still small and under no circumstances has it invaded the surrounding tissues.

(2) If there is any doubt about localization, then the lesion may have already invaded the chest wall, the pectoralis muscle, or the skin, and has become a doubtful or border line case.

(3) If the breast has become fixed, and the carcinoma has invaded the pectoralis minor and major muscles or the skin to any extent, or the axillary glands, or the supraclavicular glands, then the case is absolutely hopeless from the standpoint of surgery and should be subjected to irradiation only.

(4) Those cases should be grouped separately; in which the patient is greatly emaciated; in which the tumor has undergone necrosis; and in which auto-intoxication has occurred.

In Group (1)

The Localized Carcinoma: It should be treated by surgery alone. Radiation therapy has no place in the treatment of this type of carcinoma of the breast. There is no excuse for anyone to treat a localized carcinoma of the breast with radium or x-ray. It must be treated by surgery because we know that radical excision of all carcinoma cells from a patient will cure that individual and nothing will do it as quickly or as well as excision.

In Group (2)

The Doubtful or Border Line Case: The one in which we cannot be certain that all the carcinoma cells can be removed by excision, should be treated by irradiation and followed with a surgical eradication.

In Groups (3) and (4)

The Clearly Inoperable Cases: They should be treated by irradiation alone, and occasionally one of these individuals may reach the point of recovery where surgery may be indicated.

The irradiation of carcinoma of the breast, as now carried out by us, comprises two stages.

(1) Introduction of radium needles into and around the primary growth, along the periphery of the breast, in the axilla, the intercostal spaces, above and below the clavicle and along the mid-axillary line.

The insertion of the needles is carried out under either local anaesthesia or gas. The skin is not incised as the needles have trocar points. Strict asepsis must be observed and the needle completely buried and the punctures covered by collodion. The introduction of the needles causes no shock and the mortality should be nil. 75 to 100 mg. of radium is used in from 40 to 50 needles. The dressing is not disturbed until the third day. The needles are usually removed on the ninth day. The average dose varies between 16,000 to 20,000 mg. hours. There is invariably some sepsis at the site of the punctures when the needles are removed. It is never severe and subsides in three or four days with hot fomentations.

Following the treatment there is some oedema of the skin and subcutaneous tissues. The primary tumor is much softer, smaller, and its borders are not sharply defined. The movements of the arm are unaffected and the general health of the patient does not suffer.

(2) About eight weeks from the time of the first treatment, surface radiation is used and from 35,000 to 70,000 mg. hours are given. This extensive radiation aims at the sterilization of the cells not affected by the needling and to provide for irradiation of the mediastinum, pleura, and lungs. The advantage of the two stage treatment is that injury to the skin is avoided; a period of rest is given to the patient and the treatment seems to be more efficient.

Treatment of Post-operative Recurrences—Cutaneous Nodules. If the nodules are few, two needeles of radium are inserted into the

tissues on each side and adjacent to the nodule. The needles are left in position nine days. If the nodules are numerous, surface radiation alone is used.

Supra-clavicular Glands. Surface application is employed, covering the side of the neck and extending below the clavicle. A total dosage of 12,000 mg. hours are given in three weeks time.

Ulcerative Neoplasums Near the Sternum—Involving Cartilage or Bone. Much larger doses are required. The treatment is by surface irradiation and as much as 40,000 mg. hours have been given.

It is generally recognized that carcinoma of the breast in the beginning, is a local disease, which remains localized for a comparatively short time. From this primary focus there is an early dissemination along the lymphatic channels and usually the earliest metastasis occurs in the axillary lymph nodes.

Early distant metastasis in some cases indicates a transmission of tumor cells through the blood stream. Metastasis to the lungs, pleura, and mediastinum frequently remain unrecognized until the disease in these regions has advanced. The early recognition of chest metastasis by an x-ray examination, even before objective signs are present, is obviously important for the following reasons:

(1) It indicates the disease is beyond the operable stage.

(2) It permits a more rational plan of treatment, based on a knowledge of the extent of the disease.

Primarily, the treatment of metastasis to bones is for the purpose of relieving pain. Metastasis to the spine and pelvic bones is most distressing to the patient. In the majority of these cases a marked relief from pain for a period of several weeks may be expected following x-ray radiation. In addition to the relief from pain one may expect a partial regression of the metastatic tumors, with of course, a cessation of bone destruction and an over-growth of new bone formation.

We are aware that the resources now available against carcinoma of the breast are efficient in proportion to the early discovery of the disease and following the work of Warren in his, "A Roentgenologic Study of the Breast," we feel that a definite step has been made toward the early recognition of this disease.

In the Normal Breast. The structures can be clearly seen. The nipple stands out from the areola. The fibrous tissue surrounding the ducts is definitely outlined. The base is sharply separated from the pectoral muscles. The lobules of the breast are sharply differentiated from the fatty tissue. In the axilla the nodes are often seen. The normal breast varies from the flat compact type to the large obese one where the structures are spread apart by the masses of fat.

Chronic Mastitis. It is difficult to separate the early changes due to the inflammatory process from the normal. The edges of the diseased area are indistinct. The inflammation tends to involve the ducts and lobular structures, though the fatty masses maybe involved. The wide-spread involvement in a large majority of our cases was quite surprising.

The Breast in Pregnancy. At about the fifth or sixth month there is shown an enlargement of the fatty masses and the lobules. The outline of the ducts are more dense. At the onset of labor the breast has a congested, hazy appearance and the fibrous structures are lost, to return to a normal appearing breast usually within two weeks but the diffuse haziness in the outline of the ducts has a tendency to remain as long as the breast is lactating.

Benign Tumors of the Breast. These are clearly outlined from the other structures. The density is homogenous but the connective tissue stroma is shown through this density. The division and interweaving of the masses can be clearly seen. The only differentiation between the uniform, dense, benign tumor and a malignant one of the same density, is the continuity of the capsule and the absence of deformity.

Malignant Tumors of the Breast. The chief characteristic is what one would expect—distortion, scarring, puckering and infiltration in an irregular manner. The tumor is recognized as a dense mass of tissue with irregular edges and feathery strands of dense tissue involving the ducts and lobules. Infiltration along the lymph channels into the axilla with enlargement of these nodes is frequently seen.

SUMMARY

(1) The conception of operability must be changed from: "Is the carcinoma of the breast removable" to "Is the removal of the lesion going to cure the patient."

(2) Lesions that are extensive, and those with metastatic changes, and others that are irremovable, either because of their situation or involvement of important structures, may be treated with radiation with gratifying results.

(3) Longer periods should be taken from which the patient must be free from a recurrence before the term "cure" should be applied.

(4) Carcinoma of the breast requires careful physical and X-ray examination to arrive at a more strict and distinct understanding of what comprises inoperability and upon this classification of the case should rest our method of treatment.

(5) The inoperable cases comprise fully two-thirds of the primary carcinomas of the breast.

(6) Routine biopsy in inoperable cases for diagnostic purposes is unnecessary and may result in dessemination of the disease. In the early case it is essential.

(7) Radiation to pulmonary metastasis presents as yet an unsolved problem, while radiation to bone metastasis usually gives marked relief from pain.

(8) The dangers of over radiation should be stressed. They are generally underestimated.

(9) A roentgen study of the breast has been discussed which we believe will be absolutely diagnostic in some types of cases and of considerable assistance in others. The method unquestionably has limitations but these will be lessened by improvement in interpretation.

The result in our series of cases seem to warrant the impression that this type of examination is of distinct clinical value.

(10) Radiation therapy, both radium and X-ray, has a distinct place in the treatment of carcinoma of the breast. Its use may be limited. It is not a specific for malignant disease. But one fact stands out very clearly—no patient, however inoperable, should remain untreated.

(11) Radiation therapy is not antagonistic to surgery. It is one of its adjuncts and better and more lasting results will be obtained if the surgeon will adopt a better conception of operability and become more conversant with the possibilities of this method of treatment.

DISCUSSION

DR. D. A. RHINEHART, Little Rock: Dr. Lockwood is to be complimented most highly for his able presentation. The examination of the breast by means of X-ray films is a new procedure, only one paper having appeared in American literature on this subject. From the slides that we have been shown, it would seem that a new diagnostic and differentially diagnostic examination of great value has been devised, one that may, as experience accumulates, be as important as the X-ray examination of the stomach.

I was impressed with the positive statement made by Dr. Lockwood that every breast tumor, even those that are far advanced, should be given radiation therapy. The treatment he described, interstitial radiation with radium needles containing a small quantity of radium filtered through platinum and continued over a long period of time, is in keeping with the latest ideas of radium therapy. Treatments given in this way apparently give better results than any other that has been devised.

DR. S. F. HOGE, Little Rock: I want to add my bit to the congratulation of Dr. Lockwood and thank him for bringing this subject before us. I believe he has done much to center our attention on the subject of cancer and the members of this committee are indebted to him for this very excellent paper.

There are really two points I would like to emphasize. The first one is that cancer is primarily a local lesion but this primary period is probably far shorter than many of us think. We have sufficient records from Dr. Bloodgood and others that this lesion may remain local possibly for as short a period as six weeks and then metastasize into distant parts of the body.

This brings the question primarily up to the family doctor who sees these patients early, when this lesion is at least deceptive, and many of us, I am sure, are rather inclined to minimize the importance of a small lesion in the breast early and think that maybe it will disappear. I am speaking from experience. We have had cancer clinics at the Fairs over the State and met the lay people in all different stratas of society and gained impressions from them. Many of them would come in with a tumor in the breast as large as an olive and if we ask that patient how long it had been there, she probably would answer any time from two weeks to two months, and rarely did we get a history of a case farther back than that. Knowing the histology of some of these tumors, we were sure that the lesion had been there much longer. Pressing them closer, we would ask when they first noticed a little irregularity or a little thickening or a little difference in the consistency of the breast, then they would say, "Oh, that's been there for two years but we didn't pay any attention to that and we went to the family doctor and he said that would be all right and it would disappear." I fear right there lies the secret.

The other point I wish to emphasize and call attention to is that the doctor cited one case in which a mistaken diagnosis was made. That takes up the subject at the other end of the line, where the better trained men, even under the best conditions, make mistakes. We can't make a mistake in the diagnosis of cancer without somebody pays and that is usually the patient. If we call it cancer and it isn't, there is usually a scar on the breast to mark our mistake. If we say it isn't cancer and it is, possibly there is a tombstone in the grave yard to emphasize our mistake. I sometimes wonder if the responsibility isn't just about as important with the man who first sees these lesions in their miniature stage as it is in the later stage when there is no dodging the issue.

DR. M. E. McCASKILL, Little Rock: One thing which impressed me particularly is this opening up of a new field for early diagnosis with the aid of the interpretation of a skilled roentgenologist. The doctor has shown us the difference between the roentgenological appearance of a cystic mastitis and malignant breast.

It is a very interesting thing and should be of great assistance to us when our X-ray men have perfected the technique and skill in making interpretations such as has been shown here today.

DR. LOCKWOOD, in closing: Regarding the question of technique that Dr. Rhinehart brought up, as I stated, the technical procedure is rather difficult. We have had our trials and troubles but if anyone is interested, I would be glad to pass on to them some of our difficulties that they may avoid them.

Dr. Hoge spoke of the local lesion. I think he is perfectly correct in stating that the lesion of primary carcinoma of the breast remains local only for a short time, how long, no one knows. I think there is a variance in the different types of carcinoma. Consequently if we can find a local lesion in the breast, why not remove that local lesion? I think that the general practitioner, who comes in contact with these cases first, has a rather difficult time to persuade his patient the idea of an operation until he has entirely satisfied himself. Consequently we have endeavored, by following the work of Warren, to give some definite roentgen evidence to the physician whereby he may have something tangible to show his patient.

Following the work of Warren, in his, "The Roentgenological Study of the Breast," we feel that a definite step has been made towards the early recognition of carcinoma of the breast, however, we should recognize that the microscopic examination of excised tissue is essential for correct diagnosis and treatment. It is a matter of personal gratification to observe that slowly but surely prejudices and misunderstandings regarding the roentgen examination of the breast is disappearing before the rapidly growing evidence in its favor and my belief is that Warren, in his study of the breast, has shown us the method whereby we may recognize carcinoma early, differentiate it from other lesions, definitely define its extension and outline its invasion of the surrounding structures. If this is possible, we will recognize the lesion in an earlier stage, allow more perfect eradication by surgical methods, give the patient a better and more permanent chance for complete cure and prevent many useless and mutilating operations.

CLINICAL SYMPTOMS IN THE PROGNOSIS OF TUBERCULOSIS*

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For the past century, the trend of the medical profession has been more and more to the study of the anatomy of the human body. Students are taught to know anatomy and to diagnose and treat diseases according to the anatomic pathology found. Physicians are inclined to give more importance to form and structure than to function. They are influenced more by evidence of pathology than by clinical symptoms. Anatomy and pathology have been given far more consideration than disturbance of function in medical discussions. The demonstration of a specimen or microscopic slide showing deviation from normal, affords much satisfaction to the demonstrator and is received by the profession enthusiastically.

However, it is a fact that changes in function produce symptoms which are the physiologic pathology present and on which we must depend largely for our diagnosis. Furthermore, the restoration of normal function is the purpose of therapy. So much consideration has been given anatomic pathology that we are prone to forget the physiologic pathology which really means so much in the diagnosis and treatment of disease. Clinical symptoms have not been given the consideration which they deserve. Accepting anatomic pathology as our basis for the diagnosis and treatment of disease has led to the grouping of specialists according to the organ involved. Consequently, if the same organism affects the throat, heart, lungs or appendix, we have the throat specialist, heart specialist, lung specialist or surgeon, respectively. Anatomically, pneumonia is confined to the lungs. Likewise, typhoid is confined to the intestines; yet pneumonia and typhoid are both general infections. Tuberculosis is also a general infection, and its intelligent study and treatment calls for an internist who has a broad view of not only the actual anatomic involvement but also of the clinical symptoms which indicate clearly the balance that exists between a patient's disease and his resistance.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

Disease converts normal anatomy into pathology, but this would not be important if it caused no disturbance of function. Experienced tuberculosis workers know that the anatomic change may be very extensive, with little change in function, and not be serious. But marked disturbance of function, with little or much pathology, is always serious. One cannot give a dependable prognosis from the anatomic concept. No physician would offer a prognosis based entirely on the anatomic pathology found. But the clinical symptoms representing the physiologic pathology or the patient's reaction to his disease, mean much toward a prognosis. Of course, a broader concept is obtained by a combination of both the anatomic and physiologic concept. Following the general trend to accept form and structure as being more important than disturbance of function, the classification of tuberculosis is based on the anatomic involvement, which is not nearly so important as the clinical symptoms.

Turban's classification of tuberculosis into three stages is the basis of all adopted classifications. It is based on the amount of involvement. It was his opinion (as stated by himself in discussing his classification before the International Tuberculosis Conference in Berlin, in 1908) that no other factor played such important part in the prognosis of tuberculosis as the extent or spread of the disease. The turban Gerhardt classification adopted by the International Conference at Vienna in 1907, follows the same anatomic scheme suggested by Turban, but lessens the amount of involvement for the various stages.

Our National Tuberculosis Association followed the dominant anatomic basis but added a physiologic concept by requiring the consideration of the patient's symptoms in determining his status. This was real progress. But even in this classification, the anatomic entirely overshadows the physiological concept. The American Sanatorium Association, in 1916, adopted a classification further amplifying the importance of symptoms and permitting three classifications according to symptoms under each anatomic division, offering the following combination:

Incipient A, B and C,

Moderately advanced A, B and C,

Far advanced A, B and C.

Turban offered his classification as a means of arriving at uniformity so as to enable physicians properly to arrive at more or less definite and dependable conclusions as to the results of treatment. He believed that involvement was the most important factor in the prognosis. He aimed at uniformity. But, in order to have uniformity, all examiners would have to examine with equal ability and equal care and would have to use equal judgment in interpretation. Such is not the case. Without the aid of the X-ray, the findings of different physicians in any case of tuberculosis vary considerably and even with the aid of the X-ray there is often a wide difference of opinion. The attempt at such a classification, however, has helped materially. It has demonstrated that the cases with lesser involvement without marked physiologic disturbance, are the more favorable cases for treatment. But it has further demonstrated, to more careful observers, that anatomic involvement, without consideration of symptoms, is a very poor basis for a prognosis. The physician attempting to follow these classifications is apt to have impressed on his mind that the extent of the lesion is the greatest factor and that the seriousness of the case can be mechanically measured. It causes him to concentrate on the extent of the disease instead of on the condition of the patient.

While the classifications used in America today are a combination of the extent and character of the lesion, on the anatomic side, and the clinical symptoms of the patient on the physiologic side, nevertheless, the anatomic side remains uppermost in the minds of most observers. They attempt to assign mechanical exactness to processes which are by nature most inexact. While uniformity is the aim of all classifications, it is impossible in actual practice.

Strains of tubercle bacilli are of different virulence and patients have different resistance; therefore, it naturally follows that the balance existing between the disease and patient must differ. Likewise, the ability and methods of examiners differ. Many factors on the part of the patient must be considered, such as race, age, constitution and economic status. These and many other factors (all) differ in each patient. These variations make uniformity in disease unobtainable. The use of the X-ray has helped materially in determining the extent of the disease. But even

the X-ray is not by any means definite, since the human element must enter into the technic of taking pictures and even more into the interpretation of the same. As the X-ray often reveals the inability of the internist to determine the character and extent of disease in the lungs, likewise the autopsy often exposes the faulty interpretation of X-ray pictures.

I should like to ask if anyone can arrive at mathematical exactness as to the involvement in a given lung by the aid of both physical examination and X-ray findings? Furthermore, if all the varying factors could be eliminated and a definite amount of anatomic involvement could be established, would this give us a prognosis? After all, the ultimate reason for classification is to be able to determine the probable result in a given patient.

The divisions of first, second and third stages, or of minimal, moderately advanced and advanced, are purely arbitrary. They in no way tell us what is taking place. It is far better to have a whole lobe involved with the non-virulent fibroid type of tuberculosis than to have a small spot one inch in diameter necrosing. The first type of lesion shows that the fighting balance is on the side of the patient. Furthermore, a patient who withstands an extensive active lesion well has a far better chance to get well than one who withstands a small active lesion poorly. What patient and physician want to know, is not how much lung is involved, but how is the individual patient reacting to the disease that he has, and is he able to overcome it? Is the balance in favor of the patient or is it in favor of the disease? Are the normal smooth working cells of the body tissues disturbed and if so, to what extent? What is his physiologic as well as his anatomic response toward his tuberculosis? While we cannot and should not fail to consider the anatomic involvement, our chief consideration should be the amount of deviation from the normal physiological working of the body cells which has taken place. The relatively greater importance of the physiologic conception, as compared with the anatomic, is illustrated daily in our clinical experience. While, all else being equal, the greater the involvement the more serious the disease; yet, the extent of the lesion alone is but a minor point in destroying the patient. Furthermore, at best, it cannot be even approximately measured. The amount of disturbance to the normal working equilibrium of the body cells is the chief factor in prognosis—the physiologic rather than the anatomic deviation from normal. Disturbance of function is what brings the patient to the physician, and it is largely on this that the physician must base his diagnosis as well as his prognosis. The ultimate purpose of the physician and the ultimate hope of the patient is the restoration of normal function.

The physiologic pathology is more easily measured because it is expressed in symptoms.

One patient, after suffering a progressive necrosis destroying a large part of one or both lungs, is able to regain a fair degree of health because his physiologic equilibrium is well-preserved in spite of the extensive involvement. On the other hand, we sometimes see a small necrosing spot so disturb the physiologic balance of a patient and so depress his reacting power that the process spreads and becomes a menacing disease. We also sometimes see what seems to be a very slight anatomic lesion, accompanied by mild symptoms, and yet healed with the greatest difficulty. Such a case, in my opinion, is of mild virulence but fails to heal with usual rapidity because of the disturbance to the patient's physiologic balance.

In considering the relative value of symptoms one must consider their permanency and their effect on the recuperative power of the patient, as well as their cause. A temperature of 101, continuously, or at frequent and repeated intervals, is much more serious than one of only a few days duration. It is also more serious if the patient is resting than if he is exercising. It is also more serious in a happy, optimistic patient than if maintained by worry. The rate of the pulse is also more important with the patient on complete rest over a long period of time and if taken carefully, eliminating the effects of exercise, excitement, worry, etc. Loss of weight is serious only when the cause cannot be corrected. Cough, expectoration and the number of bacilli are important only when considered over a long period of time. The same patient, studied when a small spot is necrosing, may raise much more, and examination of the sputum may show a great increase in the number of tubercle bacilli, yet, in a few weeks the activity in the process

may quiet down and the patient may be relatively free of cough and expectoration.

An analysis of all the symptoms of tuberculosis would show that the toxic symptoms are the ones which disturb the physiologic balance of the patient most. Certainly, the cause of death in tuberculosis is not due to the inability of the lungs to furnish oxygen. The cause of death seems to be a disturbance of the physiologic process to such an extent that the cells cannot continue to function in such a way as to keep the body in a state compatible with life.

The symptoms may be divided into three divisions: (1) reflex symptoms, (2) symptoms due to the process (per se), (3) toxic symptoms. Reflex symptoms are hoarseness, cough, digestive disturbances (hypermotility and hypersecretion), circulatory disturbances, chest and shoulder pains and flushing of face. Symptoms due to the process per se are spitting of blood, sputum, frequent and protracted cold (tuberculosis bronchitis) and pleurisy (tuberculous pleuritis). Toxic symptoms are malaise, fatigue, weakness, nervousness (digestive disturbance), increased metabolic rate, loss of weight, increased pulse rate, night sweats and fever.

With this grouping, one can readily see that the reflex symptoms and those due to the disease process per se are not the ones which cause the serious changes in the body. It is the toxic group, or clinical symptoms, which really endanger life. The toxins of tuberculosis cause a more or less harmful stimulation of the nerve cells producing a general nerve instability or nervousness. They also disturb the endocrine system, causing a loss of the chemical control of the body, with an increased acid condition of the tissues and with a diminution of the free water of the body, which interferes with the normal chemical activity of the body that should take place, and without which the body cannot be kept in a state of health.

Consequently, the prognosis in tuberculosis is individual. It does not depend on the extent or severity of the disease, but upon the manner in which the patient is able to preserve his physiologic equilibrium in spite of the extent and severity of the disease. Two patients may be suffering from tuberculosis of similar extent and intensity, as far as we are able to determine; and yet, one may sleep well, eat well, gain weight, and gradually lose his temperature, while the other sleeps poorly, is troubled with indigestion loses weight and gradually grows worse. What is the difference? It is not the disease, but the manner in which the two patients react toward the disease. It is not the anatomic extent or the intensity of the involved area in the lung that makes the difference, but the difference is in the individual physiologic equilibrium of the two patients.

The serious symptoms are always the toxic ones and are associated with clinical activity. Regardless of what symptoms may be most prominent, any patient who, for any great length of time, shows unfavorable reaction to the toxins, must be classed as unfavorable. In other words any patient with an increase of clinical symptoms after a prolonged period of bed rest, offers a serious prognosis.

The clinical symptoms, finally, are the key to the prognosis. The classification of tuberculosis into its anatomic stages has its place, but it is of minor importance as compared with the clinical symptoms.

The anatomic concept leads to a mechanical attitude toward the disease and leads away from the personal element, which is the more important factor of the disease. On the other hand, the physiologic concept leads to the personal element and encourages the study of each patient as a reacting organism. While a combination of both the anatomic and physiologic concept is necessary to a clear, definite understanding of any case of tuberculosis, nevertheless, the prognosis depends chiefly, if not entirely, on the physiologic reaction of the patient, regardless of the extent or intensity of the disease.

DISCUSSION

DR. S. W. DOUGLAS, Eudora: I think Dr. Riley is to be congratulated on presenting such a difficult paper in such a clear and concise manner. The most certain thing we have in regard to the prognosis in tuberculosis is its uncertainty. The individual case presents so many problems that we can't tell just what is there. Take the incipient cases and I believe about 85 per cent may have a possible chance of arrest. The secondary cases run about 60 per cent and the third classification that Dr. Riley gave run something like the chance of 30 per cent of getting arrested. Many factors enter into this. First, the amount of pathology present in the patient; second, the duration of the disease; third, the virulence of the infection. These three things are pitted against the resistance of the patient. The three are really overbalanced when it comes to the

prognosis of the resistance of the patient because you can't tell when the nodule is going to break into the pleura causing an empyema, or when it is going to erode into a blood vessel and produce hemorrhage or when it is going into the bronchial tube and cause a general infection of the lung, or it may go into a blood vessel and cause meningitis. So in this condition we can't make any true prognosis of what is coming. I believe the individual patient has more to do with it than anything else. It seems that they are born with an optimistic turn of mind.

DR. D. C. WALT, Little Rock: I did not hear all of Dr. Riley's paper but that part which I did hear offered some very fine suggestions. The tuberculous patient does not die from loss of tissue alone, but really more from auto-intoxication plus the infection. All ptomaines from decaying animal and vegetable matter have carbon for a base. Carbon is the destructive element of animal life whether in the gas main, the damp of the mine, strychnine, or the venom of a snake.

When the pendulum of medicine swings as it should the family doctor will still be the protector of human life, and, when he does as much as he should as soon as he should the specialist will be less in evidence. It is a disgrace to our method of procedure that a young man like Hoover's son, lacking neither money nor doctors, should have tuberculosis.

If we knew as much about health as we do about disease we would educate every individual to co-operate with the doctor, then health would be more in abundance and disease would be at a minimum. We make better horses than men. They are both animals. I am now 68 years old and if I live I expect to do better work at 80 or 90 than I do now because I will have had each day's active care from now until then.

DR. J. S. RINEHART, Camden: If you had ears this morning, you heard something. I regret that every physician in the State of Arkansas didn't have the opportunity to hear Dr. Riley's paper. The doctor understands his business. He talks, thinks and lives tuberculosis. And if Osler was right, he is at least half educated, because he said, "Know tuberculosis and know syphilis and you know it all." And I feel certain that Dr. Riley knows tuberculosis.

I regret that the State of Arkansas is not amply able to take care of tuberculosis. I believe we ought to have five or six times the capacity we have now. We ought to have a department of tuberculosis where those who are hopelessly ill can go and be soothed over to the other life, and plenty of room for those in the beginning of tuberculosis. I think, if the physicians will get behind the Legislature as the people and politicians did behind the agricultural school, we could have that sanitarium enlarged so that they would have room there for the population of the State. I am against the dissemination of the facilities of this State in tuberculosis; I am in favor of concentration. I mean one plant instead of half a dozen plants; one tuberculosis sanitarium instead of half a dozen. We don't have competent men like Dr. Riley who are at hand to place in four or five different places. Concentration is the order of the day, in business, medicine or anything else. I think before the Legislature meets again there will be no talk about any other tuberculosis sanitarium but an enlargement of the present plant.

DR. A. G. LEE, Texarkana: I want to ask Dr. Riley if he is familiar with and can state just what our relations should be with the tuberculosis association. The secretary of the association, Miss Chambers, wrote our society wanting us to appoint a committee under which the association could operate in holding a clinic in this county, and she wanted a clinician appointed to come here, from a list she gave us, to make our examinations on a certain date, and she wanted assistance from the doctors. She asked the society to sponsor the movement. We didn't do it, and I was wondering what the other societies were doing. We favored the proposition of the members of the society participating in it. It was referred to the president to appoint a committee. I appointed the county and city health officers to do this work because we couldn't take the responsibility of it but could co-operate by lending our assistance. I would like to ask the doctor to state what is being done over the State.

DR. RILEY, in closing: I want to thank the gentlemen for the nice discussion. Regarding the possibility of adding to or having more than one institution, it may be interesting to you to know that last month our total cost was less than it was a year ago, although we have about two hundred more patients now than we did a year ago. (Applause.) I think you can readily see that if a physician can have a large enough organization to hire intelligent co-operative assistants in the business end of the institution instead of having to give himself entirely to it, naturally, he could economize.

About the relationship of the Arkansas Tuberculosis Association to the Society; I don't know too much about that although I am one of the board of directors. I spend my time at Booneville. Dr. Fulmer here can tell you all about it, but the Arkansas Tuberculosis Association is a voluntary organization that tries to finance itself with Christmas seal sales, and they do a wonderful work. Inasmuch as tuberculosis is a menace to the public health, I think you ought to contribute all the support and give all the co-operation you can to that organization. They are a group of enthusiastic, efficient workers trying to diagnose tuberculosis and trying to help you diagnose it. They are quite willing and anxious to refer back to you any case they diagnose. Through the efforts of such organizations tuberculosis has been reduced in its death rate from 200 to 70 per hundred thousand.

I want to say to you as frankly as I can that I am pleased with the progress being made by the physicians over the State. We have a staff meeting at the sanatorium every Wednesday and Saturday at 8:30 a. m., when we present from twenty to forty cases; X-ray pictures, clinical charts and physical findings are discussed. We will be glad to have physicians visit us.

As to President Hoover's boy, I was told that President Hoover purposely had the world know that his boy had tuberculosis to overcome the feeling with some people that it was a disgrace for tuberculosis to be in the family. I thank you.

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Editorial

THE FOOD WE SHOULD EAT

The question of what to eat, according to a recent statement by the U. S. Public Health Service, is one of our daily problems that, too frequently, is decided on the basis of convenience instead of logical thinking and accurate knowledge. The food we eat has much to do with whether we shall have a healthy body or a sick one, and improper food selection often leads to conditions that can be corrected only by long periods of proper food adjustment.

A little too much fat or carbohydrate in the diet may eventually result in obesity, which is frequently never properly corrected. An insufficient amount of certain of the vitamins may produce serious disease, permanent deformity, and sometimes death, if not corrected in time. It is indeed fortunate for our well-being that the selection of the proper foods is not difficult. The foods we should eat can be determined without the aid of a dietitian, and are available in every American city.

In addition to water there are five groups of substances that must be present in our diet if we are to remain healthy. These are as follows: (1) Vitamins, (2) minerals, (3) proteins, (4) fats, and (5) carbohydrates. American diets, when deficient at all, are most likely to be deficient in minerals and vitamins, and the American housewife should be particular to secure an adequate supply of these substances.

We now know of several different vitamins, all of which must be in the diet if health is to be maintained. These can be conveniently considered in three classes: First, those obtained with fats—such as butter, cream and fish-liver oils; second, those which are destroyed by cooking and which are obtained with fresh, uncooked vegetables and fruits, such as lettuce, cabbage, tomatoes, oranges, apples, etc.; and, third, the vitamin not harmed by cooking, and obtained principally with lean meats and milk.

Minerals are necessary for the proper formation of bones and blood. Milk is one of the most important foods we have for richness in minerals and vitamins. It supplies most of the vitamins and all of the minerals we need, except iron. It is especially rich in lime. Oatmeal is fairly rich in vitamins and

minerals. Dried beans contain iron, phosphorus, and calcium. Spinach, lettuce, cabbage and other green leafy vegetables provide minerals and vitamins. Tomatoes, oranges and apples are also to be recommended.

After an adequate supply of minerals and vitamins is assured, the next most important thing to be considered is the protein. The proper kind and amount of protein must be present or normal growth and development will not take place. It has been estimated that the daily diet of an average man should contain about 3½ ounces of protein. If we secure our protein in the cheapest manner (that is, in vegetables, particularly beans of various kinds), we obtain a protein of poor quality, and in order to make the diet correct we must add protein of higher quality, such as that from milk, milk products, meats, fish, and eggs. Those who can afford it usually prefer to have most of their protein in the more costly form of eggs and meat on account of their palatability. Protein from milk and meat is known as *complete* protein, on account of its good quality, and the fact that it does not require the addition of protein from other sources.

After attending to these items, the energy value of the diet should be taken into consideration. We must know how much to eat in order to have enough fuel to do our work without using the body tissues. In order to know this we estimate the fuel value of the diet in calories. The calorie is simply a convenient unit of measure. One ounce of protein or carbohydrate supplies about 115 calories, and one ounce of fat about 264 calories; and so all that we have to do is determine the composition and amount of the food we eat in order to know the fuel value of our diet. Most books on nutrition and dietetics give tables showing the caloric value of definite amounts of the common foodstuffs. It has been estimated that an American man or woman living a quiet life at home, with little exercise, needs about 2,500 calories a day; if working, without much exercise, 3,000 calories; on light work, 3,500 calories; and if doing hard work, 4,000 or more calories are necessary.

Fats are important additions to the diet on account of their high energy value. They supply about twice as much energy as an equal weight of protein or carbohydrate, and thus relieve the body of the necessity of dealing with an excessive amount of material in order to obtain a large number of calories. The most important fatty foods are butter and cream, because of their palatability and ease of assimilation, and because they carry vitamins with them. It is difficult to obtain a sufficient caloric intake in a diet which is without fat. However, an excessive amount of fat tends to cause digestive upsets in certain individuals and gives a disagreeable feeling of heaviness after eating. On the other hand, a proper quantity gives a desirable feeling of comfort and well-being. Improperly fried foods should be avoided, since grease soaked through the food tends to obstruct the work of the digestive fluids.

Carbohydrates are necessary in order for the body properly to use the protein and fats in the diet; and for this reason the bulk of the diet should be made up of carbohydrates, which may be obtained from the large number of starchy and sweet foods.

In addition to making the diet nutritionally sound, there are other important things to be considered. A certain amount of bulk seems to assist the body in handling the waste products of digestion. A sufficient quantity is usually obtained from the green vegetables in the diet.

Another factor is palatability. An attractive table of well-prepared food tends to increase food consumption. The diet may also be planned so that there will be no feeling of hunger at the end of the meal. Certain foods are known to have a greater satisfying value than others. Meats of various kinds are most important in this respect. Butter and other fats, and soups containing meat extractives, are also valuable; and a dessert, or other sweet food taken at the end of the meal, increases its satisfying effect. Thus, a prominent American nutritionist states that a meal consisting of, first, a soup containing meat extractives; second, meat and potatoes, to which may be added starchy vegetables, then a salad with an oil dressing, and ending with a dessert, gives the greatest degree of satisfaction.

Some of the leading nutrition experts in the country have summarized a man's normal dietary needs in order to enjoy health, as follows: One quart of milk, two salads, two liberal helpings of the leafy portions of green vegetables, one helping of any meat, and two eggs. He may add to this anything within

reason that his appetite demands, including a liberal supply of bread, butter, fruit, and various vegetables. It should be remembered, however, that if we eat more food than we need, the body stores up part of the excess as fat, and continued overeating leads to unsightly deposits of fat in the body. On the other hand, an insufficient amount of food leads to emaciation, even if all of the necessary dietary factors are present. We must, therefore, watch the quantity as well as the quality of the food we eat.

Editorial Clipping

VIRGINIA'S GOVERNOR AND THE PUBLIC HEALTH

Immediately following the death of Dr. Ennion G. Williams, who was the first and only State health commissioner of Virginia and who served continuously from July, 1907, until the time of his death, June 6, 1931, Governor John Garland Pollard of that State, with the unanimous recommendation of the State Board of Health, requested the United States Public Health Service to detail Dr. Warren Fales Draper to serve as State health commissioner until a permanent successor is selected. Governor Pollard deserves for this unusual action the congratulations and commendation of every physician and public health official in this country. He has recognized the truth of the statement made by Disraeli that the preservation of the public health is the first duty of the State. He has risen above political considerations, in taking this action solely to insure the continuity of properly qualified public health leadership in Virginia. Those who know the difficulty of securing public health officials in this country at the meager salaries usually offered and with the lack of any guarantee of continuity of service will the better appreciate the significance of the action taken in Virginia. Apparently, the State Board of Health and the governor realized that time will be required to secure a permanent health officer with the proper public health and educational qualifications. It is also significant that the governor of Virginia was supported by leaders both in the practice of medicine and in the field of public health. The press of the State has been enthusiastic in its indorsement. The governors of other States, the mayors of cities, and county boards employing full time health officials may well be inspired by this action.—*Jour. A. M. A.*, Aug. 1, 1931.

Abstract

Elmore B. Tauber, Cincinnati (Journal A. M. A., July 4, 1931), gives an historical review of ancient, medieval and modern dermatology. Characteristically and clinically, the past concerned itself with the morphology and color and was kaleidoscopic. The present concerns itself with the microscope and with pathology and is indefinite. The future will concern itself with the laboratory and chemistry and will be definite. American physicians began to study in Europe about 1870 and, returning, digested what was given them. In the last three decades, however, Europe, as far as they are concerned, has lost its Holy Grail and American students abroad find quite early that, although American physicians still need the help and experience of that older civilization, they have developed their own work to such a point that they are able to give as much as they receive. Of course, the clinical material abroad is concentrated and is more readily used for research work, but this handicap is being overcome surely and steadily. A group that up to the present has not led to a definite school or schools is being slowly created; but it is still in a pioneer stage. There are four centers in America that are steadily advancing and are creating an American dermatology that can and will stand the critical assay of time and that will give a definite work and school to place it in the foremost position where it belongs. Metabolic studies, sympathetic nerve changes in relation to dermatology, biochemistry and clinical medicine in its broad phases will connect these relations to skin diseases in a very definite manner. The development of synthetic organic chemistry in the past fifty years has brought chemistry into close contact with medicine and dermatology. The most spectacular contribution of organic chemistry is in chemotherapy. This feature in the medical and biologic aspects of chemistry is the effect on living tissue of minute traces of chemical substances. These substances are the harmones vitamins and enzymes. Although the chemical nature of most of these awaits solution, their clinical

importance is rapidly increasing. Future dermatology with an understanding of the real medical interpretation will be correlated in terms of metabolism and ductless gland dysfunction; also in relation to infections and allergy. This will lead to an interpretation and understanding of biochemical relations which at present are more or less obscure. Obviously, neodermatology will differ in its facts, and the contact between dermatology and general medicine will be welded into a real union. Dermatology will be cutaneous medicine. Dermatologists will have to know clinical medicine serology, bacteriology, biochemistry, histology, immunity and physical therapy, as all these factors are in a greater or lesser degree causes or necessities for true interpretation of skin disorders. The future will depend on a great evaluation of all these methods, with a synchronization of them that will bring a knowledge of dermatology that now is seemingly only a vision. A thorough knowledge of all other diseases will be necessary for the study and the practice of the dermatology of the future.

Personal and News Items

The Franklin County Medical Society met July 15, with Drs. D. W. Goldstein and J. M. Taylor of Fort Smith as guests. Dr. Taylor discussed "Acute Appendicitis" and Dr. Goldstein, "Treatment of Syphilis." Others present at this meeting were Drs. Wigley of Mulberry; Porter, Gibbons, Blackburn, Peters and Douglass of Ozark.

Dr. Vernon Tarver has moved from Huttig to Star City.

Dr. and Mrs. S. J. Hesterly visited in Little Rock this month.

Dr. James M. Kolb of Little Rock has moved to Clarksville, where he is associated with his father, Dr. J. S. Kolb.

Dr. Laman A. Gray, a senior medical student at Johns Hopkins, spent the month of June with his parents, Dr. and Mrs. Frank A. Gray of Batesville.

Dr. Leroy Long, dean of the University of Oklahoma School of Medicine, resigned when Governor W. H. Murray insisted that chiropractors be allowed to practice in the University hospital.

The staffs of the Leo N. Levi Memorial Hospital and the Charles Steinberg Clinic invite you to attend a clinical conference on Thursday, October 1, 1931.

The conference will last one day and will consist of lectures, demonstrations and clinics on medical and surgical subjects. The material will be selected so as to be of interest to the general practitioner.

The roads from all directions into Hot Springs are in excellent condition. An early start from the most distant corner of the State will enable one to arrive in time for the first clinic at 9:00 a. m.

The entire staffs of the hospital and clinic will participate in the conference.

A buffet luncheon will be served in the hospital.

There will be no registration fee.

Wm. H. Deaderick M. D.,
O. H. King, M. D.,
Grayson E. Tarkington, M. D.,
Conference Committee.

Dr. S. F. Hoge, Little Rock, has moved his office and laboratory from the Hall Building to the Gann Building, 215 East Sixth Street.

At the May meeting of the State Medical Board of the Arkansas Medical Society the following were issued license by examination:

Paul Autry, Henry Borow, T. D. Brown, P. A. Bleakney, E. J. Easley, James McD. Hayes, Marshall Harris, L. L. Hassell J. H. Hellum, C. R. Henry, Peter Wm. Hess, Garrett Jackson, Jr., Leon King, T. W. McDaniel, Jr., A. R. Power, A. J. Pauli, Ralph Perry, W. A. Regnier, R. K. Stetzler, H. B. Throgmorton, W. T. Wilkinson, Jr., J. M. Walls, C. R. Williams, Jno. T. Walsh.

Those issued license by reciprocity were:

Jno. Wm. Norton from North Carolina; Ewell Irving Thompson, Wm. Thomas Wilkins, Jr., and McKinley Voorhies from Tennessee; Jno. C. Breedlove from Oklahoma; Ian McKenzie from New York; Ralph R. Nowlin from Texas; Herbert B. Wentz from Illinois.

Obituary

CUNNING, JOHN R.—Dr. J. R. Cunning of Lonoke died July 18, 1931. Aged 70. He was born in Ireland and came to this country at the age of five, locating at Atoka, Tenn. He attended the medical school in Louisville, Ky., where he was graduated in 1896. He moved to Tomberlin, Lonoke County in 1896, and a few years later to Lonoke where he lived until his death. He was city health officer at the time of his death.

Surviving are his wife, one son, Dr. John Ed Cunning of Colorado Springs, Colo.; two sisters, Miss Marie Cunning of Lonoke and Mrs. J. L. Laymon of Ardmore, Okla., and two grand-children.

Book Reviews

Annual Reprint of the Reports of the Council On Pharmacy and Chemistry of the American Medical Association for 1930—Cloth. Price, $1.00. Pp. 91. Chicago: American Medical Association, 1931.

This book is essentially a record of the negative actions of that distinguished body, the Council on Pharmacy and Chemistry of the American Medical Association; that is, it sets forth the findings concerning medicinal preparations which the Council has voted to be unacceptable for recognition and use by the medical profession. Many of the reports record outright rejection or the rescinding of previous acceptances; others report in a preliminary way on products which appear to have promise but are not yet sufficiently tested or controlled to be ready for general use by the profession.

Among the reports recording outright rejection are those on: Avesan (H), formerly Nuforal, a mixture stated to be composed of formic acid, sodium nucleinate, camphor, allyl, sulphide and chlorophyll, with traces of salicin and sulphuric ether, marketed with unwarranted claims of usefulness in the treatment of tuberculosis, asthma, and other respiratory diseases; Ceanothyn, once before rejected and still found to be marketed with unsupported therapeutic claims; Collosol Calcium and Collosol Kaolin, so-called colloidal preparations, the former an unscientific mixture of unproved value, the latter a possibly dangerous preparation, and both marketed with unwarranted claims; Ephedrol with Ethylmorphine Hydrochloride, an unscientific ephedrine preparation marketed under an unacceptable proprietary name with unwarranted therapeutic claims; Farastan, an unscientific iodine-cinchophen preparation proposed for routine use in "arthritis . . . and Rheumatoid conditions"; Haley's M-O Magnesia-Oil, a magnesia magma and liquid petrolatum mixture in fixed proportions marketed with emphasis on the "M-O"; Lydin, a testicular extract, marketed with claims of value in the treatment of impotence; and Metatone, a shot-gun "tonic" mixture marketed under a proprietary name with unwarranted therapeutic claims.

New and Nonofficial Remedies, 1931, containing descriptions of the articles standing accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1931—Cloth. Price, postpaid, $1.50. Pp. 481 + LVI. Chicago: American Medical Association, 1931.

This volume is the annual publication of the Council on Pharmacy and Chemistry of the American Medical Association giving the latest authentic information concerning those of the newer medicinal preparations found worthy of the consideration and use of the medical profession. Each year the Council scans the general articles under which the various preparations are classified and revises these to conform to the latest and best medical thought.

A glance at the preface shows that a number of preparations have been omitted because they conflict with the rules that govern acceptance, because their distributors did not present evidence to demonstrate their continued acceptability, or simply because the manufacturers have taken them off the market. Important revisions have been made in a number of the general articles and in the descriptions of various preparations. Among the new preparations that have been found by the Council during the past year to be eligible for admission to the book are: Amytal and Pulvules Sodium Amytal, 3 grains, barbiturie acid derivatives for use preliminary to surgical anesthesia; Thio-Bismol, quinine bismuth iodide, sodium potassium bismuthyl tartrate, and Tartro-Quiniobine, bismuth compounds for use in the treatment of syphilis;

Scillaren and Scillaren-B, preparations containing the squill glucosides; two new cod liver oil concentrates; Synephrine, a new vasoconstrictor, and synthetic thyroxine.

New and Nonofficial Remedies should be in the hands of all who prescribe drugs. The book contains information about the newer materia medica which cannot be found in any other publication.

The Surgical Clinics of North America—(Issued serially, one number every other month). Volume 10, No. 3. (New York Number—June, 1930). Octavo of 265 pages with 123 illustrations. Per Clinic Year, February, 1930, to December, 1930. Paper, $12.00; Cloth, $16.00 net. Published by W. B. Saunders Company, Philadelphia.

The Surgical Clinics of North America—(Issued serially, one number every other month). Volume 10, No. 4. (Southern Number—August, 1930). 268 pages with 96 illustrations. Per Clinic Year (February, 1930, to December, 1930). Paper, $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

The June issue represented as the New York Number contains 21 interesting clinics. From the Clinic and Surgical Service of St. Luke's Hospital, Dr. Morris K. Smith describes "Thyroid Cases." Then, in the August issue, known as the Southern Number, Dr. William D. Haggard of Vanderbilt University, Nashville, contributes a clinic on "Intrathoracic Goiter." Dr. Haggard makes the statement: "What does it profit a patient to allow a small growth in the neck by delay to become an intrathoracic goiter while she is oblivious to this difficult and dangerous complication that is overtaking her?"

A Compend On Bacteriology, Including Pathogenic Protozoa—By Robert L. Pitfield, M. D., Attending Physician, Germantown Hospital, Philadelphia, and Howard W. Schaffer, M. D., Pathologist to the Memorial Hospital, Philadelphia; Assistant in Dermatological Research, University of Pennsylvania. Fifth Edition, with 4 plates and 82 other illustrations. Published by P. Blakiston's Son & Co., Inc., 1012 Walnut Street, Philadelphia. Price, $2.00 net.

This little book serves the needs of the physician who desires to acquaint himself with the principle facts of this rapidly growing science.

Chapter IV gives in outline the essential accepted teachings in immunity.

The physician was giving an informal talk on physiology.

"Also," he remarked, "it has recently been found that the human body contains sulphur."

"Sulphur!" exclaimed the girl in the blue-and-white blazer. "And how much sulphur is there, then, in a girl's body?"

"Oh, the amount varies," said the doctor, smiling, "according to the girl."

"Ah," returned the girl. "And is that why some of us make better matches than others?"—*Exchange.*

Abstract

THE PHYSICIAN AS A HEALTH WORKER

According to L. O. Geib and Henry F. Vaughan, Detroit (Journal A. M. A., Aug. 8, 1931), the health department inaugurated in Detroit in 1928 a program of participation by the general medical practitioner in official public health procedure the ultimate objective of which was to secure the sympathetic and whole-hearted support of the medical profession in order that the general practitioner might not only practice curative medicine but actively take his part and share his responsibility in the preventive medical program. A campaign to secure protection against diphtheria, for young children, more especially the preschool child, was used to interest and stimulate response from the general practitioner. The program has, (1) secured the protection of 70 per cent of preschool children and 80 per cent of school children against diphtheria, without the use of free clinics; (2) reduced the diphtheria rate to one-fourth of the level existing prior to the beginning of the campaign; (3) provided for post-graduate conferences on communicable disease control; (4) completely changed the attitude of the medical profession toward the work of the health department and, more especially, eliminated the antagonistic feeling that has frequently existed toward the work of the public health nurse; (5) stimulated parental responsibility for the care of the child; (6) provided compensation to physicians for service rendered to the indigent; (7) actually served as a beginning to make a health center of the office of each physician, and (8) afforded an opportunity to expand the program of health conservation with medical co-operation into other fields, such as tuberculosis and cancer control, periodic physical examinations, and the health of mothers and infants.

County Societies

INDEPENDENCE COUNTY

(Reported by FRANK GRAY, Secretary)

The Independence County Medical Society met in the county courthouse in Batesville, August 10. Preceding the meeting, a social hour with supper was held in the Johnson Hotel.

Present: I. M. Huskey and G. T. Laman, Cave City; T. J. Woods, Evening Shade; O. S. Wood, Salem; Paul Jeffery, Bethesda; V. D. McAdams, Cord; R. C. Dorr, J. H. Kennerly, J. M. Hooper, T. N. Rodman, L. T. Evans, C. A. Churchill, O. J. T. Johnston and Frank A. Gray, Batesville.

Dr. Chas. Harris and R. L. Smith of Melbourne were visitors. Dr. Aubrey Jones joined the Society.

Program:

"Leukemia," with report of case, by Dr. L. T. Evans, Batesville.

Dr. V. D. McAdams, Cord, presented a paper on "Insect Bites," with special reference to spider bites.

The second Monday night in October the Society will have as their guest the District Medical Society, of which Dr. C. A. Churchill is president and Dr. Frank A. Gray, secretary.

FOR SALE—A Complete First Aid Station. The following equipment was used during construction of Carpenter Dam. Most of it is suitable for office practice. All is suitable for First Aid use:

1 Electric Sterilizer	$19.00
1 Operating Table	11.25
1 Waste Receptacle	.50
2 Pus Pans, each	.45
1 Urinal	.50
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1 Surgeon's Sink	27.25
2 Pairs Scissors, each	.20
6 Prs. Hemostatic Forceps, each	.50
1 Metal Top Table with Bottle Rack	10.00
1 Bed Pan	1.25
4 First Aid Kits, each	8.00

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Original Articles

SOME ESSENTIALS OF GOOD SURGERY*

CHAS. S. HOLT, M. D., Fort Smith

Glancing over the surgical literature of the present day, one is impressed by the emphasis placed upon the mechanical phase of the art. It is our feeling that this aspect is over emphasized, and that the numerous small details which go before and after an operation are neglected. We shall attempt to be illustrative rather than comprehensive in this paper. In the minds of the laity, the operation is the thing. It is human nature to be impressed by the spectacular. We hear so much of the sensitive hand of the famous surgeon, or about his dexterity with the scalpel, that we come to look upon him as we do upon an artist or sculptor. Patients however, are not flat canvasses or cold blocks of marble. Medicine is not, and never will be an exact science. We do not want to belittle skillfulness, because it has a most important place in the realm of successful surgery. On the other hand, any one who has gone through the slaughter house in any of the large packing plants does not fail to be impressed by the dexterity of the men who can disembowel an animal with a sweep of the knife and yet not cut a gut. Yet could these men differentiate a sarcoma from a bunion? In this paper we hope to give you a glimpse behind the curtain to see what goes on before and after an operation that it may attain its highest degree of success.

One of the first essentials is *diagnostic ability*, which can only be acquired after years of hard work and an extensive knowledge of surgical pathology. Upon the diagnosis depends the decision as to the operability or non-operability of the condition, and the location of the incision.

Another essential which is of perhaps even greater importance is that quality known as *surgical judgment*. Upon this judgment rests the decision of which of the many therapeutic measures at our command offers the most hope of success in so far as the patient is concerned. In carcinoma of the cervix should we use radium or perform a radical Wertheim pan-hysterectomy? It also determines the time of operation. Of what avail is the thyroidectomy done in twenty minutes if the patient dies twenty-four hours later from a thyroid intoxication occurring because the operation was performed on a patient with a high basal metabolic rate and without adequate preparation?

The time of operation cannot be determined by rule of thumb methods. The surgeon who uses cut and dried methods of treatment is doomed to frequent chagrin and disappointment. The time varies with the individual patient as well as with the stage of the pathological progress. In acute appendicitis, as long as the disease is confined to the appendix, immediate operation is urgently indicated. At a later stage, when perforation has taken place and particularly if cathartics have been given, we have a different story. Ochsner was the strongest exponent of the conservative treatment of perforative appendicitis. He quotes Richardson as saying that this type of case is too late for an early operation and too early for a later operation. He proved the correctness of his view by reducing the mortality in this type of case three-fourths in his personal cases. He showed that the conservative treatment of perforative appendicitis offers not over 2 per cent mortality if the following principles are strictly observed:

1. *Gastric lavage.* Although the patient may be vomiting continuously, it is surprising what a large amount of material may be

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

recovered with a stomach tube. Today we have the duodenal tube which has the advantage of being of small calibre, flexible, and may be left in the stomach continuously. This affords excellent drainage and prevents the reverse peristalsis induced in vomiting.

2. *Prevention of peristalsis* in so far as possible. Peristaltic movements tend to disseminate the infection. The fundamental principal of the conservative treatment is to get the infection to localize. We accomplish this by restricting food or fluids by mouth. Alvarez has shown that the ingestion orally of even small amounts of water sets up peristaltic movements. Opiates are administered freely both to restrict peristalsis and to allay pain.

3. *Administration of fluids* by other channels to avoid dehydration. Glucose solutions in 5-50 per cent concentration intravenously are excellent agents in combatting acidosis as well as supplying fluids.

4. *Use of Fowler's position.* If the abscess localizes it is highly desirable that it do so in the pelvis where the peritoneum is more resistant to infection. By this position gravity aids in localizing the process.

On the other hand, immediate operative intervention before walling off has taken place, give a mortality of not less than 4 per cent with a greatly increased percentage of morbidity.

If we are to lower the mortality and morbidity in osteomylitis, an accurate diagnosis plus operative drainage is necessary in the first three to five days of the process. In other conditions as perforated duodenal ulcer, strangulated hernia, gunshot wounds of the abdomen, or ruptured ectopic pregnancy demand instant operation. Early surgery of the lacerated, hypertrophied or chronically infected cervix is the best prophylactic measure against carcinoma of that organ that we possess. Proper restorative measure applied to the relaxed perineum may prevent a future neurosis.

Tubal inflammatory disease presents still another problem. Simpson in 1909 laid down the dictum that the inflammation should be *cooled down before operation.* With the rapid strides made in the perfection of surgical technique, "fools began to rush in where angels feared to tread." Miller in a recent review of the situation in New Orleans, found that in the uncooled cases the mortality had risen to 4 per cent as compared to a 1 per cent mortality in an equal series of cooled cases. The increase in morbidity is corresponding. Rest in bed, sedatives and hot douches help many of these unfortunates escape operation altogether. Curtis even claims that operation for salpingitis of gonorrheal origin is never indicated except for an occasional end result, such as persistent pain or irregular bleeding, providing that the source of infection is cleared up. The pathology in a cooled case is markedly decreased. Ovaries that would have unhesitantly been sacrificed in the acute state of the process appear surprisingly normal. Should not the surgical judgment displayed in the conservative method of treatment receive more credit than a brilliant cophorectomy performed earlier in the case? Because in the former method we have not only eliminated the pathology, but we have conserved an important organ, which is the aim of all successful surgery.

Another illustration of the role played by surgical judgment is given in the treatment of joint tuberculosis. Anyone who has observed the results obtained by Rollier in this disease by heliotherapy, will be in favor of abandoning the knife as a therapeutic agent in this condition.

Good surgery is based upon a number of details which of themselves may appear unimportant. However, no chain is stronger than its weakest link. We make it a practice to take a complete history and make a thorough physical examination upon each case. It is just as important to know what is not wrong with a patient as it is to know what is wrong. The choice of the anesthetic, method of approach, preoperative preparation or postoperative treatment may depend on these findings.

At this point a few words about these details may not be amiss. Fluids are forced preoperatively. An unbroken night's sleep, often induced by a mild hypnotic, is conducive to the mental calm so important before operation. A tap water enema given an hour before the scheduled time of operation is usually sufficient to cause the bowels to be in a collapsed state, and is preferable to the drastic purging formerly employed by surgeons. A word or two of encouragement, given with a smile by the surgeon, before the anesthetic is started goes a long ways toward allaying

apprehension. One usually finds that in a highly nervous patient with a tachycardia at the start of the anesthetic, the pulse rate continues to mount throughout the operation and sometimes cuts short essential surgical procedures. For this reason a competent anesthetist is a valuable adjunct. A soothing word during the induction is often the key to a smooth anesthetic. An experienced finger upon the pulse tells the surgeon how far he can go. The choice of the anesthetic is also an important factor in the success or failure of an operation. Ether, nitrous-oxide-oxygen, ethylene, sodium, amytal, avertin, nerve infiltration or block, spinal or rectal anesthesia all have their indications and contra-indications.

The postoperative care at times taxes to the utmost the ability of the surgeon. Of first importance is the co-operation of a capable efficient nurse. A little reassurance, or attention to small comforts, such as a hot water bottle under the small of the back, is often as efficacious as an anodyne. Shock should be recognized at its inception and combatted at this time if good is to be accomplished. In the operative work in the Clinic, we aim to be aware of the average complication twenty-four hours ahead of the time it becomes self-evident and to start treatment immediately. A patient may suffer intensely from a distended bladder although apparently voiding normally. A catheterization converts this patient from a sick one to a well one. One common complication which often escapes recognition, is a dilated stomach. Frequent gastric lavage supplemented by postural measures is curative. Bloodgood has stated that the interne on the surgical wards should carry a stomach tube instead of a stethoscope. Another cause of prolonged postoperative vomiting is the establishment of a vicious circle by acidosis. It readily responds to the administration of adequate amounts of glucose intravenously, by hypodermoclysis, or by proctoclysis. A small dose of morphia at the beginning of pain is more efficacious than a larger dose when the patient is worn out with suffering. Frequent turning of the patient may mean the difference between broncho-pneumonia and an uneventful convalescence. Proper early treatment of a stitch abscess may save the patient from a deep-seated and dangerous wound infection. A complaint of pain in the leg occurring in the latter half of convalescence should act as a warning signal of an impending phlebitis and be treated as such. We have observed such cases in which well-meaning but misdirected efforts at massage on the part of the patient or by relatives have been rewarded with a detachment of the clot, and a fatal pulmonary embolism. A rectal tube or small enemata of water and glycerin relieve pain due to gaseous distention of the large bowel far better than any anodyne. Urinary suppression following an operation often yields to the intravenous administration of glucose solution in concentrations of 5-50 per cent. Postoperative intestinal obstruction does occur and must be recognized early. An enterostomy at this time may be life saving.

Another detail which helps pave the way to success in surgery is the ability to give an accurate prognosis. To a good diagnostician the prognosis goes hand in hand with the diagnosis. To the laity it is far more important. The patient or his relatives look to the surgeon for an expression of the possibilities for success or failure in the operative procedures he has recommended. It means more to a patient to be told that she will probably be out of the hospital on the eighteenth day, than that she has a dermoid cyst five centimeters in diameter in the left ovary.

The surgeon's work is not done when the patient leaves the hospital. The patient must be instructed in detail how to take care of himself. Proper diet, exercise, or a suitable tonic may prevent a prolonged convalescence and restore a worker to his job in less time. Because nature is able to work under adverse circumstances, is no reason for making her do so. If a patient invests the time and money necessary for an operation, the surgeon owes it to him to give him the best possible results. We try to check the progress of our patients at frequent intervals for the first six months or longer after leaving the hospital and at longer intervals for one to two years.

As was stated at the beginning, no attempt was made to make this paper all inclusive. The object was merely to illustrate some of the details behind the screen that make for good surgery. When you hear a special nurse make the remark that Dr. So-and-So's patients always seem to get along so well, and when you watch this surgeon operate and see that he performs the operation no differently

than any average surgeon, you can be sure that he has mastered the details of which we speak. Long years of hard work and careful thought usually stand back of the statement "uneventful convalescence" on the discharge note of the history rather than the few moments spent in skillful manipulations.

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DISCUSSION

DR. M. D. OGDEN, Little Rock: I hate to see a paper like this go undiscussed. Dr. Holt says he couldn't possibly cover all the essentials of good surgery, but I think he mentioned the major ones. I was hoping that he would mention perhaps two more conditions which are often overlooked in surgery. One is incomplete surgery. You often hear a woman state, when you advise an operation, that she doesn't wish to have it done because one operation leads to another. Of course, we know that feeling quite often arises through the fault of the surgeon, especially in some of the gynecological work. For instance, a patient comes in with various complaints due to chronic pelvic inflammatory disease with a history of having had her last labor perhaps seven or eight years ago, followed by leukorrhea, general weakness, nervousness and a constant bearing down sensation, as they express it, and increased frequency of menstruation of increasing duration. That is usually the history these cases give. On examination you will find a more or less relaxed perineum, a very much enlarged swollen edematous cervix with profuse leukorrheal discharge. On bimanual you will find a tender enlarged uterus with perhaps a retroversion and perhaps not. The question arises, what to do to relieve the condition. We should do all that is necessary and I think it is usually necessary to do a perineorrhaphy and a tracheloplasty. Then go in above, do a suspension if necessary and tie off the ovarian veins and if possible let the ovaries alone. I think that is so often where the mistake is made. It is a big temptation to go into the abdomen and take one of the ovaries out, or do a double oophorectomy or to take parts of both of them out. When we do that we are just courting trouble because that patient will come back eight times out of ten in perhaps a year or year and a half complaining of a heavy, dragging pain in the region of one or both ovaries, and on examination you will find a very large and tender mass, which is a cystic ovary. You are then faced with the decision as to what to do and very often what is done is another abdominal operation with a single or double oophorectomy, and this I believe is wrong, as the trouble can usually be relieved by X-ray treatment. We should not touch those ovaries in the first operation. Let them alone. It is usually an inflammatory condition and it will go down. To bother an ovary like that, I think, is not an essential of good surgery, to use Dr. Holt's expression.

As to appendiceal infections, if you find these intestines stuck together, I think you will realize how futile it is to attempt to control the dissemination or the distribution of pus by any position either up or down. I think therapeutic measures should be directed towards the support of the patient as a whole in combatting the infection and not with any idea of any local control of general peritonitis.

DR. HOMER DUPUY, New Orleans, La.: In our preoperative care we should anticipate post-operative acidosis. We regard this as a very important question, especially in T. and A. operations. Any general anesthetic, but, ether especially, may induce acidosis, which expresses itself in undue, persistent vomiting, high temperature, and a drowsiness particularly in children. We have observed comatose conditions of ether origin. We have witnessed one death from severe post-operative acidosis. In my Charity Hospital service and in private practice all patients, children and adults, who are to receive general anesthesia are put on a course of alkalies and sugars. Try it and see how the post-operative vomiting, general ill-feeling, are markedly less frequent.

DR. A. G. LEE, Texarkana: I have enjoyed listening to a good paper, by a good surgeon, upon a good subject. But I do want to offer some friendly criticism, of the custom of removing INNOCENT appendices, just because they get in the way. AN INNOCENT APPENDIX DOES NOT GET IN THE WAY, AND SHOULD NOT ANNOY YOU, furthermore, IT WILL ASSURE YOU, IF YOU WON'T BOTHER IT, IT WON'T BOTHER YOU.

In opening an acute abdomen—or even a cooled pelvis, it is my custom, not to disturb the appendix, except, in the presence of definite pathology. Even then, I consider seriously the time element and the gravity of the primary operation before subjecting the patient to two operations—each one of which has a mortality of its own.

I recognize the fact, the cooler the pelvis, the safer it is to remove such an appendix. But with the average Arkansas surgeon I am inclined to believe there are but few sufficiently cooled at the time of operation.

Dr. Holt gives no history or evidence of his appendix showing pathology, but, notwithstanding, removed it, solely because it was in the way. This is what I criticise. If a surgeon opens an acute or infected belly, and should accidentally cut or puncture a gut, you would consider he had committed a serious surgical blunder. We are taught by text books and masters how to use precaution against such accidents. If you remove an innocent appendix, that is exactly what you have done, punctured or cut the intestine. You may use all proper precaution and surgical technique, but the condition is exactly the same. Even though it seems, I am with the minority on this subject, from my viewpoint, that such a practice is equal to a surgical blunder.

Also, there is a medico-legal consideration, which must not be lost sight of. Give a capable damage-suit lawyer evidence that you have removed an innocent appendix, during some other

surgical procedure, with the additional information from a qualified post-mortem report that "The patient died from hemorrhage at the stump of an appendectomy, or a peritonitis evolving from the same source, and that the seat of the primary operation indicated satisfactory progress" then, I want to assure you, I am of the opinion, the CHECK BOOK route would be the easiest way out. I do not believe your insurance policy would protect you under such circumstance.

If such procedure is justifiable, then why not find justification in a surgical attack upon any other innocent part of the anatomy. Another condition, I want to mention, is, the post-operative failure of bowel movement. About the third or fourth day of an infected abdomen or pelvis, the inflammatory condition is reaching its height. In six or eight days it is well on its way to subsidence. About the third day, we are taught in textbooks, the bowels should be moved, and an attempt at that time finding no response, the surgeon sometimes becomes alarmed. As long as the inflammatory condition is progressive, nature is surrounding the area with a plastic splint and making every effort to immobilize the parts, but as soon as the phagocytes have performed their duty, this splinting is gradually removed. That's why you don't take your stitches out till the eighth to twelfth day, that's why pneumonia has a crisis about the sixth to tenth day. When this inflammatory resolution—sixth, eighth or tenth day comes, it is as rapid as in pneumonia, and that's why you see the bowel, from some unknown cause, move about this time, whether you give a purgative or not. That's why you start on the third or fourth day, giving something each day, trying first one thing and another, and about the seventh to ninth day, when you are worried to last point, they surprise you by moving, and you fix your mind on that last particular therapeutic measure used, as your ideal—or IDOL, as a means of securing a post-operative bowel movement. Some surgeons' habits are so well fixed, as to this third day movement, that the nurse in charge gives the PILL, without any individual consideration, of the particular case, or a reason for not doing so. About the third day, the patient is suffering from gas pains, the temperature is up, a PILL is given—which would nauseate a well person—vomits, and the surgeon becomes alarmed, opens again the belly, tears off his plastic splint, and the patient has to go through the same process the second time. The surgeon gives up all hopes and explains the seriousness to the family. The patient's sustaining forces being sufficient, he tides over his inflammatory hill again and in due time a resolution takes place and the surgeon has another explanation to make—"DUE TO HIS WONDERFUL PERSONAL SKILL," he has tided the patient through and now assures the family that he feels reasonably safe. Then, again, this same patient may not have that sufficient sustaining force, and as a result of inefficient surgical judgment, succumb from the effect of unwise energy, and a PLUS added to the surgeon's mortality, as a result. Just what this sustaining force is, has never been demonstrated, and no unit of measurement, whereby accurate and determining record of it may be supplied. The scrutinizing eye of experience observes it, but the laboratory fails to demonstrate it, however, this is the factor that determines the success in every case. The ability to observe and utilize it safely, constitutes surgical judgment—without which, perfect technique is dangerous. The vegetative nervous system controls the function of the alimentary tract and within this sustaining force lies the adynamic type or classification of ileus. The secondary or sympathetic nerve cells, up and down the spinal column are not responsible for the condition known as ileus, but the blocking of transmitted nerve current, from infection or inflammatory process in the afferent or efferent nerve endings of the affected intestinal area inhibits the current and the central system failing to receive the signal, obviously neglects to signal orders back to the affected area, therefore, no bowel movement. It is claimed, through the certain therapeutic measures, such as eserine or pituitary substance, marked effect may be produced. This, evidently, is upon the principle of adding a stronger battery for electrical force, and thereby driving a current through badly wired terminals. The injecting of certain paralysing agents within the spinal cord for the purpose of inhibiting the control within the sympathetic cells, theoretically, is difficult to understand, though possible, even in the presence of bad wiring. Small doses of atropine depresses the inhibatory to some extent and thereby tends to increase to accelerator action, larger and persistent doses increase this action to the degree of spasticity, and thereby possibly defeating the very purpose for which it may be given. Opium, through its depressing and pain-relieving effect is too often illogically used through our sympathy, while its restriction of peristalsis is overlooked.

If the alimentary tract is not obstructed, there will be a bowel movement of its own accord about the fifth to eighth day. If there is mechanical obstruction, angulation or strangulation, the gravity of the disturbance will be in proportion to the completeness of the obstruction, or the resistance of the patient and the toxcity from absorption. There is a distinguishing feature between the toxic and the morphinized case which the scrutinizing eye of the surgeon should be able to see, but the laboratory will not be able to demonstrate nor able to help you but little. This expression when coupled with distinctive symptoms will signify urgent necessity for interference. But I am convinced, that in too many instances, the surgeon's apprehension on account of no bowel movement urges him toward an occasional heroic measure with unfortunate results, when had he used a little more patience and less sympathy, the results would have been different.

DR. HOLT, in closing: I enjoyed the discussion very much and want to thank those who took part in it. Dr. Dupuy of New Orleans is situated just a little better than we are. He has a hospital where he can get them in and keep them for several days. We have to do our work in the first twenty-four or forty-eight hours. We tell our patients to eat peppermint candy a few days before and drink lots of water. Regarding Dr. Ogden's patient, we should think this was a pelvic inflammatory condition. We have been able to reduce the mortality in this type of case by depending upon the sedimentation test to tell us when to operate. Many times when you think they are cooled down, judging from a normal temperature reading, a sedimentation test reading of twenty—thirty-five minutes shows that they are not. We just operated the day before I left on a case where the sedimentation test was only forty minutes against a normal of one hundred and twenty. You can operate on a reading from forty minutes, up. You will always find your pathology in your cooled cases in the way the sedi-

mentation test shows you. We believe that will help us reduce our mortality in these pelvic inflammatory conditions.

We have no hesitation in removing an appendix in a cooled pelvix. Whether or not there is a pathology of that organ, makes very little difference unless you want your patient to have the appendix. We have had no trouble in removing the appendix in cooled cases.

Another point in post-operative treatment that has added considerably to the comfort of the patient and the smoothness of the convalescence has been the substitution of a small tap water enema for the time honored dose of castor oil on the third or fourth day. There has seemed to be no special value in subjecting a patient who has just begun to recover from the anaesthetic to a second period of nausea, even vomiting and severe cramping pain. Food as soon as the patient is able to retain it is the best stimulant that we have for restoring the normal rythmic intestinal peristalsis rather than drastic purgation.

"THE CLINICAL SIGNIFICANCE OF DYSPHONIA" (Illustrated)*

Homer Dupuy, M. D., New Orleans

No organ reacts more promptly, definitely, than does the larynx when there is pathology within its own borders. Through its central and peripheral motor nerve connections it gives very reliable information as to troubles contiguous to, and remote from, the larynx itself. Hoarseness, therefore, is a symptom only. Its interpretation is quite available by laryngoscopic examination. This means is yet too universally neglected. Thus we miss the early diagnosis of tumors, tuberculosis, syphilis of the larynx proper. All lesions so curable in their incipient stage. We also are deprived of important information, sometimes first signals of distress, relative to hysterical aphonia, of central origin; enlarged thyroid gland pressing on a recurrent laryngeal nerve; gumma, tumors of the thorax, aneurism of the arch of the aorta; these lesions by pressure on one of the inferior laryngeal nerves, usually the left nerve, will give some degree of hoarseness. The laryngoscope gives unmistakable evidence of vocal cord paralysis. With this general survey of what hoarseness may indicate through a laryngeal examination, we will briefly particularize and emphasize special affections. Laryngeal diphtheria is of subtle, gradual evolution. Croupy cough, low pyrexia, hoarseness which precedes dyspnoea, upper throat shows no membrane. In ninety-eight percent of cases this means primary laryngeal diphtheria. (Spasmodic croup is of sudden origin. In a few hours all symptoms disappear.) We have not heeded the dysphonia, sometimes with fatal results, even in this day of our specific serum therapy carcinoma of the larynx lends itself very hopefully to surgery, provided the growth is localized within its borders. Regional metastasis is a late invasion, which early diagnosis and radical surgery can thwart. To secure some of our brilliant surgical results, we must take serious cognizance of dysphonia which has lasted for several months. Can a gumma of the lung be mistakened for pulmonary tuberculosis? Personal experience shows: Patient hoarse. Losing weight, etc. No examination of larynx. Sent to piny woods for the "miracle of a cure." Referred to Hotel Dieu, New Orleans, we found by laryngoscopic examination, right vocal cord paralyzed. This meant pressure of right recurrent laryngeal nerve. No T. B. of larynx. Wassermann positive. Purulent sputum negative as to T. B. Post mortem, large, broken down gumma of upper apex of right lung. Laryngeal examination when T. B. was ignorantly suspected would have saved this life.

We could multiply such examples in the neglect of hoarseness. We pass it by, true, it often only means the common garden variety of inflammatory laryngitis, but, it very frequently is the signal of more serious and curable trouble.

May we emphasize, that hoarseness lasting over a week or so demands a modern explanation. The motor central and peripheral connections of the larynx makes it an informative and reliable source of knowledge in diagnosis, not only when it is itself the seat of disease, but, when there are pathologic changes far distant from its own structures. Such a reaction, by its chief symptom of hoarseness, should command the constant attention of physician, surgeon and specialist.

DISCUSSION

DR. L. H. LANIER, Texarkana: I think it would be presumptuous to try to add anything much to what Dr. Dupuy has said in his beautiful presentation of the pathology of the larynx, but I am going to ask him in closing, if he will, explain the mechanism of an artificial larynx.

I would like to ask Dr. Dupuy also in just what per cent of his cases does he use direct laryngoscopy and whether he suspends all his cases in direct laryngoscopy.

I had a case of dysphonia in that of a man accustomed to doing a great deal of public speaking, which had lasted over a period of about two

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

years. No relief could be found, after having been under the care of very competent men. I found that he had very much enlarged and infected laryngeal tonsils, and suggested to him that they be removed. He had had his faucial tonsils removed and didn't know we have more than one set of tonsils. When I suggested a tonsil operation, he became obsteperous. He said he didn't care for any more operations. When I changed the name and told him that he had some hypertrophied lymphatic tissue at the base of the tongue and explained the necessity of getting it out, he submitted to the operation and the recovery of the voice was remarkable.

These cases that Dr. Dupuy has presented have been very interesting, but most of them require some surgical procedure excepting, of course, possibly the syphilitie conditions, and we so often see cases of follicular pharyngitis and laryngitis in those people who are apparently well and who apparently have only a catarrhal condition, and yet they develop considerable loss of voice. Now, I have had cases where I had suggested to them getting some one to train them in the proper use of the voice. Mighty few of us, perhaps less in this particular part of the country than elsewhere—"and I have a right to talk about people in this part of the country because I was born and reared near here"—know much about voice production. We don't study it and frequently in those simple cases where one is taught proper phonation and the proper use of the voice, we can get some results in treating eases that we might not get otherwise. I have also found in treating ordinary cases of a follicular or granular character, where the glands were involved, that we might by changing the diet, where they had an excess of protein in the diet—and most of those people seem to be large meat eaters—by cutting down their protein intake, we can often get good results. I mean, of course, in the simpler cases. I don't care to take up the specific cases that Dr. Dupuy showed us, but I want to mention particularly, the various diatheses, as in acute rheumatism, anemia and general debility. We may often have this condition and yet not have any definite pathology in the cords, except perhaps considerable thickening of the cords, and a shelving in of mucus between the false and the true. It is those simple cases we most often have to deal with and, because Dr. Dupuy did not mention those particularly, I would like to ask him to enlighten us a little further on such cases.

DR. J. S. RINEHART, Camden: The point that struck me in Dr. Dupuy's talk was that if the hoarseness stayed longer than three or four weeks, it meant something serious. Now, that point will always stick with me.

I want him to say a good deal about that box we put in there to make an artificial larynx, where we can talk. I am ignorant. I don't know whether we take that out as we do our false teeth or whether it is put in there permanently.

A number of years ago we were taught that there was such a thing as catarrhal laryngitis. I don't know whether there is or not. I know I run across cases in my practice what we call catarrhal laryngitis. The child is hoarse in the night and in the morning if his hoarseness is gone, our anxiety is gone, but if that hoarseness continues during the day, whether with fever or no fever or any other distressing symptoms, it becomes a matter of anxiety to the mother and to the physieian. The rule I have followed for many years was to give a dose of antitoxin for a case of hoarseness that would not pass away when the night passed away. (Applause). I have had the satisfaction of seeing them get well and I have had the sorrow of seeing them go on as though I had done nothing. I have been called in by my brother practitioners and have been asked, "what can we do?" "Give antitoxin. I have given it. Give more antitoxin, doctor." You know they give big doses. Well, after you can get no results from antitoxin, I have doubts then whether it is of diphtheritic nature. These are cases we all run against.

Dr. Brown of Chicago, and Dr. Post say there is such a thing as catarrhal laryngitis. I have classed these cases as catarrhal laryngitis, beeause I couldn't find anything to cure it. Many go on and die in spite of your antitoxin and your eonsultations with big and small men. If there is no fever, unless complications later set in, you may have a bronchopneumonia follow. If we could have a means of taking this elass of eases and curing them, that would be a step forward. They will occur in a child that has been immunized or had diphtheria. When a child has had diptheria, we think it is immunized. We feel better when we see a child when it has had the prophylactic treatment.

One more thing, and that is the word "rest" of the voice, the importance of rest, and that was the one treatment that is very important, and he told us everything rest meant.

DR. A. F. HOGE, Fort Smith: One point Dr. Dupuy brought out was a case of dyspnea not due to laryngeal disease, but goiter, or intrathoracic tumor.

I had an interesting case that I think I might as well report at this time, a patient from Newfoundland, seen in New York and Memphis, and had been given a diagnosis of mediastinal tumor. The fluroscope and x-ray showed a shadow in the midline of the aorta. which suggested tumor and tended to confirm the diagnosis of an intrathoracie tumor or mediastinal tumor. The question in my mind was, how to differentiate that from an intrathoracic goiter or substernal goiter. This patient had no visible signs of goiter externally. The thyroid was not visible. She was a large fleshy woman, with a short thick neck. I consulted all of the references available, men who had written on intrathoracic goiters and goiters generally, and none of them mentioned any differential signs. Not in any of the writings of Crile, May, Judd, etc., could I find any differential point. I had Crotty's book on Thyroid, and he had a couple of small lines in there that solved the problem. When the patient is swallowing, if it goes up it is goiter; if it descends, it is mediastinal tumor per se. Our x-ray man, in all his literature, and he has quite a large library on x-ray, could find nothing to help me to differentiate it. Because of the difficulty in finding that differential point, I thought it perhaps proper to report it at this time.

I wish to thank Dr. Dupuy for this excellent lecture or address. I have enjoyed it immensely. We should consult our specialist friends earlier in cases of hoarseness; not wait two weeks but, if you have a patient whose hoarseness persists for forty-eight hours or more and you haven't made a diagnosis, it will be well to have somebody else's help in clearing up the diagnosis.

DR. W. A. SNODGRASS, Little Rock: What about the possibility of pressure on the thymus gland affecting the voiee?

DR. DUPUY in Closing: Enlargement of the Thymus is not a cause of hoarseness. An affec-

tion of early life, wheezy respiratory sounds and dyspnoea are the outstanding symptoms.

(A physician, laryngectomized for carcinoma, and using an artificial larynx, offered himself for demonstration).

This audience is very fortunate to have heard this remarkable demonstration as to the effectiveness of an artificial larynx in restoring the human voice. Every one certainly heard the doctor. He has clear enunciation and a fairly good quality of voice. At least the tragedy of no voice has been removed by this very splendid invention. He has an opening in his trachea, through the rubber tubing attached to this tracheal opening he first inspires, and then in expiration causes two rubber bands, situated in the mettle portion of the apparatus, to vibrate. These two bands replace the vocal cords. The rubber tip held in his mouth, shaped like the mouth-piece of a saxophone, gixes him lip movements for actual speech. He also sends the sound waves into various parts of his head, such as the hard and soft palate, the nasal sinuses, teeth. etc., all of which reinforce the sounds which give him, to some degree, the individual quality of his voice. A very remarkable achievement. We all thank the doctor for this great opportunity to hear the result of an artificial larynx. It has been a real privilege for me to explain his technic of voice production.

OBSCURE ABDOMINAL PAIN—THE IMPORTANCE OF CAREFUL URINARY TRACT INVESTIGATION*

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Obscure abdominal pain in most instances is sufficiently deceptive to warrant a very thorough study in order to avoid misdirected surgery. This is especially true if the patient does not present a so-called acute abdomen where delay may mean the patients life from rupture of an abdominal viscera with associated peritoneal involvement. It is in these cases alone that I feel one is justified in immediate surgical interference without pre-operative study. This type of case is in a minority and certainly occurs infrequently and is supported by such apparent clinical and laboratory findings as to make it an honest effort on the part of the surgeon, or internist, to avoid a serious mistake in overlooking intraperitoneal lesions demanding immediate surgical attack.

I fully appreciate the feeling of uneasiness that constantly confronts the surgeon in some abdominal cases. An appendix can be very deceptive and instead of presenting the classical chain of evidence, both clinical and laboratory, everything is so confused and distorted that observation and perhaps personal experience has demonstrated that it is better to operate and remove a normal appendix than to delay and find a ruptured organ with general peritoneal involvement. I am in thorough sympathy with this type of abdomen and would rather be in error on the normal appendix side than overlook a ruptured organ with its associated complications and mortality.

As I previously remarked, these cases are not common and are either so profoundly striking in their diagnostic evidence that surgical delay is folly, or they are so peculiar in symptomatology and serology as to warrant exploration without pre-operative study in order to avoid the rare, but distressing operative finding that delay was unwise rather than profitably wise.

My purpose is to particularly call your attention to the type of abdomen, or abdominal pain, with its associated symptomatology and serology that has the emergency sign discarded and demands a careful study of the gastro intestinal tract, gall bladder and urinary tract either in combination or alone. These cases are in a majority and constitute a moral obligation on the part of the attending physician, or surgeon, to make use of every available diagnostic aid at his command in order to avoid an unnecessary abdominal exploration. He must also safeguard himself against the removal of an innocent organ only to subsequently find that the chief offender was extra-peritoneal.

I am not going to dwell on the diagnostic problems involving the gastro-intestinal tract, or gall bladder, as they are entirely out of my domain, but I will emphasize their importance by saying if the urinary tract is negative then the gastro-intestinal tract and gall-bladder must be seriously considered and vice-versa. Negative findings are of equal or possibly greater importance in a thorough urologic study.

In urology we feel that in a very high percentage of cases we can say definitely that a lesion is, or is not, kidney or ureter. This statement may sound boastful, but I feel sure that most of you will agree that in urology we are marvelously equipped with the instruments of diagnostic precision. I have refer-

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

ence to the cystoscope, ureter catheter and x-ray.

Not infrequently the acute and chronic abdomen offer difficulties in proper interpretation and tax the skill and judgment of the diagnostician. In most instances such lesions with proper study lend themselves to gratifying accuracy in diagnosis. Mistaken diagnoses are usually the result of insufficient investigation.

My purpose in this short discussion is to call your attention to the importance of careful urinary tract investigation in obscure abdominal pain. I will confine my remarks to the differential diagnosis between kidney and intra-peritoneal lesions. It is my desire to emphasize certain phases of urological diagnosis which may assist you in your daily problems of delineating the kidney and ureter from intra-peritoneal organs, particularly the appendix and gall bladder.

Let us then consider some of the practical points of this problem. I previously stated that we find little difficulty in saying that a disease is, or is not, located in kidney or ureter. This is a comfort and should preclude abdominal exploration for urinary disease.

To further substantiate this assertion, let us build around it the factors which contribute toward an accurate and dependable diagnosis when urinary tract involvement is suspected, or to be ruled out by a process of diagnosis by exclusion.

The fever in acute kidney lesions is much higher than that in intra-abdominal lesions. Chills are more frequent at the advent of the fever. Pulse rate is lower as a rule in kidney than in intra-peritoneal lesions. Leukocyte count is much more stable in acute kidney as compared to marked fluctuations in intra-abdominal lesions. The count seldom goes higher than fifteen to eighteen thousand in kidney except where peri-nephritis is present, then it runs extremely high. Nausea and vomiting are far less frequent in acute kidney than in intra-peritoneal lesions.

Abdominal examination is often deceptive. The most important clinical feature is the location of muscle spasm. This phenomena is practically always present over the seat of the inflammatory reaction and is the most valuable guide, certainly much more so than pain or tenderness, which are somewhat deceiving.

Localization of a palpable tender mass is not always indicative of the exact lesion, as the close proximity of certain other organs makes this at times untrustworthy. With thorough study, however, the problem can usually be satisfactorily solved.

One of the simplest and at the same time most important diagnostic aids in such acute lesions is urinalysis. This should be routinely done on every patient. The two glass test in the male is preferable, while a catheterized specimen in the female is essential in order to avoid contamination with vaginal secretions. It may sound elementary to speak about urinalysis, but its importance cannot be over estimated as an early lead to the diagnosis may be secured by this simple procedure.

If we would all make a routine Wassermann and urinalysis on every individual presenting themselves for examination, it would materially simplify further investigation. For example, a positive Wassermann may suggest tabetic crises as a cause for abdominal pain; and certainly the finding of pus, blood and bacteria in the urine would justify the immediate suspicion of urinary tract involvement as the cause of abdominal pain. The presence of red blood cells in the urine should always make one suspicious of urinary tract pathology. Urinary calculus, tuberculosis, tumor, and many other less serious lesions can be diagnosed through accurate investigation. Gross blood in the urine demands immediate and careful urologic study.

A negative urinalysis does not necessarily exclude the urinary tract as being a factor in obscure abdominal pain. Ptosis of kidney, ureteral stricture, ureteral kinks and hydronephrosis, all without infection, must be given consideration and study.

Abdominal pain is often very perplexing owing to reflections and radiations. The classical pain of appendix, gall bladder and kidney are familiar to all of us, but they do not always observe the hard and fast lines which have been assigned to them. One is not justified in exploring an appendix, or gall bladder, for vague indefinite pain, or what might seem to be typical pain of a certain lesion, until all of the causes which could produce this pain have been excluded.

I believe that obscure abdominal pain that is not definite for any one particular lesion should have an x-ray of the urinary tract and in many instances cystoscopic and ureter catheter investigation. This course may sound very drastic, but when cystoscopy is done

quickly it is devoid of severe reactions and certainly is better than a mistaken diagnosis with subsequent misdirected surgery.

While a negative x-ray by no means serves to differentiate a kidney lesion from the intra-abdominal ones, it is frequently the medium of locating a renal or ureteral calculus and also in a certain percentage of cases, gall stones. The x-ray may lead to confusion in demonstrating shadows which appear to be intra-ureteral and naturally supposed to be the cause of the trouble, when they are due to extraneous shadows, either glands, phleboliths, bowel concretions, or atypical gall stones and the like. This is particularly true in shadows seen along the course of the ureter. Here again accurate urological investigation must be done in order to prove whether or not the shadows are intra or extra-ureteral and thus avoid unnecessary surgical exploration for extra ureteral shadows.

A negative x-ray and a negative urinalysis in the presence of abdominal pain located in the right lower quadrant simulating appendiceal, or in the upper quadrant simulating gall bladder trouble, are no positive proof that the kidney is not responsible for the pain. Renal movabilities causing kinks in the ureter with intermittent non-infected hydronphephrosis will frequently defy all except special urological methods of diagnosis.

Uninfected hydro-nephrotic kidneys play an important part in this type of case. Stricture of the ureter with uninfected retention of urine in the kidney demands consideration.

Palpation of an abdominal tumor often proves very deceptive in allocating its nature and its site of origin. One can with assurance establish whether or not it is of renal origin in practically 100 per cent of the cases by ureter catheter and pyelography. Large abdominal tumors may be testicular in origin. It is important to carry in mind at all times the possibility of a testicle tumor so insignificant as to even escape notice, with metastasis in the abdomen.

Bladder irritability has frequently been the cause of misdirected surgery and deserves thorough urinary tract study. In some instances I am willing to admit that the bladder irritability is secondary to pelvic pathology, but on the other hand, serious kidney lesions are overlooked by paying little attention to bladder irritability and considering it from a secondary standpoint. Occasionally these bladder irritabilities associated with pains in the abdominal region are an expression of nerve disease.

The elusive ulcer of the bladder, or commonly called the Hunner ulcer, must also be considered. The urine from such a bladder may be perfectly clear in its gross appearance and even free from cellular characteristics, yet productive of intense bladder irritability. Because of the negative urinary findings, these patients are occasionally subjected to pelvic exploration in search for the cause of the bladder trouble.

It is not uncommon to find pelvic disease, or even appendicitis, associated with bladder symptoms and while some urologists have been criticized for treating bladders which are secondary to such diseases, in my experience the reverse has been more frequent. I can recall several cases of Hunner ulcer of the bladder that had previously been operated on for pelvic disease without thorough cystoscopic study.

In conclusion, allow me to lay particular stress on the following points:

1. Obscure abdominal pain with positive urinary findings demand careful and painstaking urinary tract study. Congenital malformations should be given consideration when studying the urinary tract as their preoperative discovery proves most essential when surgical attack is contemplated.

2. Negative urinary findings does not necessarily exclude urinary tract involvement and should be investigated by a process of diagnosis by exclusion, unless conclusive evidence of pathology has been definitely located elsewhere.

DISCUSSION

G. W. REAGAN, Little Rock: I want to thank Dr. Sanford for presenting such a timely paper to our Society.

In his paper, he brought to our attention that urology is as near an exact science as any specialty in medicine or surgery.

It is surpising the number of patients that have abdominal pain, that the pain is of such an obscure nature that no particular organ or adenexia can be pointed out to be at fault.

Would it not be a good procedure to include a urologic study in routine examination of these patients instead of doing a laparotomy?

I believe the public is condemning us for not getting results following such a large number of the major abdominal operations.

I hope you as physicians will heed the warning that nature gives when blood is in the urine. This always indicates serious trouble and that patient should have a urological examination.

As urologists, we are often surprised ourselves to find such marked pathology and the symptoms may have been only suggestive of Genito-Urinary tract involvement.

I am sure Dr. Sanford has done our Society a great good by presenting this paper.

DR. A. G. HARRISON, Searcy: I came here to learn and not to teach. I want to ask Dr. Sanford for some advice. I have a lady at home, fifty years of age, whom I saw some six months ago, with temperature of 105, with an enormous mass in the right side. I immediately recognized it as a kidney involvement. I introduced the catheter into the kidney and drew off 360 cc. of residual urine. I don't know what was in it. I couldn't tell a staphylococcus from a streptococcus or anything else if I should meet them in the road. I could tell it was pus macroscopically. She began to improve. I have done that for several weeks, twice a week. Each time I get quite a quantity of residual urine. She has improved rapidly; gained probably thirty pounds and up most of the time. I took an x-ray of it after injecting potassium iodide and she showed quite an acute angulation just before the catheter goes into the pelvis of the kidney. It showed quite an enlargement of the pelvis of the kidney. As long as I kept up this catheterization she did nicely. And I want him to tell me, shall I remove the kidney or do as I have done.

DR. R. L. SANDERS, Memphis: Dr. Sanford, a urologist, has presented to us a splendid paper on general surgery. In the words of Dr. John B. Deaver, "It is all true and it is all there."

Dr. Sanford excluded from his paper the treatment of such acute abdominal conditions as perforating ulcers, intestinal obstructions, fulminating appendices, torsion of the pedicles of cysts, and acute hemorrhagic pancreatitis. All these are emergencies and should be treated without delay.

His remarks were most opportune regarding chronic diseases wherein the time element is not so important. All conditions of this type which are confusing both to the surgeon and urologist should be subjected to a very careful study before treatment is instituted.

Two years ago, thirteen cases of lower right quadrant pain which had been diagnosed appendicitis were sent to us for treatment. After a thorough investigation was made, only two were found to be appendix cases. Nine had stone or stricture of the right ureter, and two others had stones of the kidney. This series affords rather extreme examples, yet it emphasizes the fact that painstaking examination will be rewarded by a discovery of the true pathologic condition if it is not at first apparent.

Dr. Sanford has so stressed the need for teamwork between the urologist, the internist, the surgeon, and the roentgenologist that further discussion would seem superfluous.

DR. J. A. FOLTZ, Fort Smith: With pain in the abdomen of this later chronic type, you must not overlook the possibility of tuberculosis of the spine in the sacro-iliac region. I had a patient in the hospital some time ago, who had had the appendix and the gall bladder removed, and made this trip to the hospital for a hernia which was the source of the trouble.

DR. SANFORD, in Closing: I thank the gentlemen for their kind discussion. Regarding Dr. Harrison's case, I would suspect from the history and the findings that his patient had a hydronephrosis, congenital type, and most likely caused either by a stricture at the uretero-pelvic juncture, or an aberrant vessel. I see only two or three things to do in order to substantiate my suspicion. One would be to do a differential kidney function and a bilateral pyelogram. In this way you could determine the function of the kidney, as well as eliminate any possibility of bilateral hydronephrosis, as this is not an uncommon occurrence.

DR. HARRISON: It was normal.

DR. SANFORD: How was the function?

DR. HARRISON: Twenty-five per cent from the left kidney and fifteen per cent from the right kidney.

DR. SANFORD: What time?

DR. HARRISON: Fifteen minutes after the intravenous.

DR. SANFORD: I would say there is the possibility that you have a chance for plastic surgery on that kidney. I would pyelogram the bad kidney. If she shows any evidence of stricture at the uretero-pelvic juncture and you have good function, then you have the chance of transplantation of the ureter to another part of the pelvis or make a longitudinal incision in the ureter at the uretero-pelvic juncture, sewing it transversely. I would hesitate about taking the kidney out with a function like that. But you have to relieve her retention, which can only be done in one of two ways, either by plastic surgery or nephrectomy.

Book Reviews

Refraction of the Human Eye and Methods of Estimating the Refraction.—Including a section on the fitting of spectacles and eye-glasses. By James Thorington, M. D., sometime professor of diseases of the eye in the Philadelphia Polyclinic and College for Graduates in Medicine. Second Edition, Revised. 322 illustrations, 28 of which are colored. Published by P. Blakiston's Son & Co., Inc., 1012 Walnut Street, Philadelphia. Price, $3.00 net.

This book is particularly suitable for all beginners in Ophthalmology. The text is concise and comprehensive. It explains how to refract, and the value of the retinoscopy. The final chapter is on Lenses, Spectacles, and Eye-glass Frames.

Treatment of Epilepsy.—By Fritz B. Talbot, M. D., Clinical Professor of Pediatrics, Harvard University Medical School; Chief of Children's Medical Department, Massachusetts General Hospital. Published by The Macmillan Company, New York. Price, $4.00.

The first section of this book refers to the history, etiology, pathology, diagnosis, symptoms and treatment of epilepsy. The second section gives the factors necessary for an understanding of dietary treatment, and detailed management of the diet.

The author hopes the book will fill the need of the practitioner and will extend the benefits of treatment to a large proportion of the half million epileptics who are believed to exist in the United States.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

WHY A STATE HEART COMMITTEE

Arthur G. Sullivan, M. D.
Hot Springs National Park

It is a matter of common knowledge that for the past fifteen years there has been an increasing morbidity and mortality incidence of heart disease in the U. S. and that as a cause of death it has far outstripped tuberculosis, pneumonia and cancer, its three leading rivals.

Taking inspiration from the Heart Committee of the New York Tuberculosis and Health Association, which had done pioneer work in this field, a larger group, more representative of the U. S. as a whole, formed in 1924 the American Heart Association. Since that time it has been making determined efforts to gather and correlate data on the subject and to raise the standards of diagnosis and treatment of heart disease throughout the country. It has established certain requirements which must be met by clinics that desire affiliation with the national organization. It has carried on publicity work by means of exhibits at national and local society meetings, by issuing pamphlets, and by furnishing educational films. It has contributed materially to improvement of diagnosis and treatment through the appointment of standing committees which have done, and are doing, notable work along these lines.

A significant feature of this organization is that it is wholly controlled by physicians and its work wholly devoted to physicians. The reason for this is fairly obvious. The average physician has less confidence in dealing with cardiac disease than perhaps any other. His grasp on this subject, including as it should the etiological, anatomical and physiological factors as well as the functional capacity and prognosis of the individual case, is less secure than he would wish. To conduct a public campaign against heart disease, to arouse in the mind of the laity an apprehension which the medical profession itself has not yet the confident ability to cope with might prove embarrassing.

Figures at present are based on data of limited scope from a number of sources. Studies on community incidence are rare, and etiological factors are found to vary widely in different sections of the country.

What are the conditions prevailing in our own State? What is the frequency of heart disease? What are the prevailing causes? How can physicians who are interested in learning more about heart disease obtain this information? To help solve these problems, and at the same time to ask for the co-operation of the State medical profession, there was recently appointed by the officers of the Society a Committee on Heart Disease.

It is the plan of this committee to affiliate with the national organization that it may have ready access to the information and resources of that body. It is also seeking the co-operation of other interested State organizations such as the State Board of Health, the Medical School and the Arkansas Tuberculosis Association. The committee hopes to acquaint physicians of Arkansas with some of the recent advances in the diagnosis and treatment of heart disease. It proposes to do this by the publication of timely articles and abstracts in the State Journal, by the presentation of papers and the sponsoring of a scientific exhibit at the annual meetings. It hopes to offer opportunity for post-graduate work for those particularly interested. Finally, it will act as a clearing house for information on all possible phases of heart disease in Arkansas.

Personal and News Items

Dr. W. A. Strauss, Little Rock, has returned from a visit to Chicago.

Dr. and Mrs. W. L. Sadler have returned from an extended visit in the North.

Dr. and Mrs. Theo Freedman have returned from a vacation trip to California.

Dr. D. A. Dickerson has moved from Louann to Berryville.

Dr. D. A. Rhinehart and family have returned from an extended trip East.

Dr. and Mrs. George D. Thompson and children have returned from a visit with relatives in Atlanta, Ga.

Dr. S. F. Hoge of Little Rock has moved his office from the Hall Building to 215 East Sixth Street, where he will continue in the practice of diagnosis and internal medicine.

Dr. J. W. R. Newton of Fort Smith has moved to Rocky Mount, N. C., where he has accepted a position as city health commissioner.

Lieut. Com. Gleaves B. Kenny succeeds Lieut. Com. H. V. Hughens, medical officer for the Little Rock Navy Recruiting Station, who has gone to Philadelphia to take a post-graduate course in surgery.

Applications for places on the program for the next annual meeting of the Arkansas Medical Society should be made at an early date to the Chairman on Scientific Program, Dr. R. J. Calcote, Donaghey Building, Little Rock.

The Benton County Medical Society in session at the courthouse in Bentonville, August 13th, adopted a resolution condemning the indiscriminate use of typhoid serums in public clinics by public health nurses as unscientific, unwise and unfair, especially in the gratuitous inoculation of persons who are not indigent.

Dr. C. A. Archer of DeQueen announces the opening of the Archer Hospital. The new structure is of brick and tile construction. It has one-story and a first floor below. The dimensions are 36x100 feet, with an 18x20 foot wing on the southwest corner. On the main floor are the reception room, three office rooms, three wards, six private rooms, two operating rooms, X-ray room, sterilizing room and baths. Floors are of hardwood, with composition tile floors in the corridor and operating rooms. Rooms and wards are connected with an electric signal lighting system. There is a dumb waiter for the conveyance of articles from one floor to the other. A convenient entrance, accessible to ambulances, is at the rear. On the lower floor are the kitchen, nurses' quarters, and two negro wards.

Clinical Conference under the auspices of the staffs of the Leo N. Levi Memorial Hospital and Charles Steinberg Clinic, Thursday, October 1, 1931, Hot Springs National Park, Arkansas. Guest speaker, Major James M. Troutt, M. C., U. S. A., Chief of the Surgical Service Army and Navy General Hospital.

Morning session 9:00 A. M., W. G. Klugh, M. D., presiding.

Invocation, Rabbi A. B. Rhine; Ulcerative Stomatitis following the Therapeutic Use of

Mercury and Bismuth, L. H. Akers, D. D. S.; Safe and Sane Methods of Handling Neurosyphilis, L. H. Martin, M. D.; Blindness: Some Causes of and Precautions Against, F. S. Tarleton, M. D.; Etiological, Anatomical and Physiological Factors in Heart Disease, A. G. Sullivan, M. D.; Laboratory Diagnosis of Syphilis with Demonstrations, D. C. Lee, M. D.; Dehydration in Epilepsy, G. E. Tarkington, M. D.; Injection Method in Hemorrhoids with Demonstrations, H. O. Lynch, M. D.; Surgical Clinic in Operating Room of Hospital, A. H. Tribble, M. D.; Syphilis in Obstetrics, Howell Brewer, M. D.

Luncheon served in hospital dining room between 12:00 and 2:00 p. m.

All clinics will be open between 12:00 and 2:00 p. m.

Afternoon session 2:00 P. M., C. S. Moss, M. D., presiding.

Pathology of Hypertension (Lantern slides), Euclid Smith, M. D.; Arthritis: Clinical Types; Diagnosis and Treatment, H. H. Preston, M. D.; Liver Function in Its Relation to Disease, James M. Troutt, Major, M. C.; The Eye in Its Relation to Syphilis, O. H. King, M. D.; The Roentgen Ray Diagnosis of Urological Conditions, H. K. Wade, M. D.; Types of Paralysis: Points in Differential Diagnosis, G. B. Fletcher, M. D.; Diarrhea and Dehydration in Children, W. G. Klugh, M. D.; Bone and Joint Clinic, V. P. Diederich, M. D.; Subject to be announced, M. F. Lautman, M. D.

Obituary

WILLIAMS, HARRY EUGENE, JR.—Dr. H. E. Williams, Jr., Pine Bluff, died suddenly in New Orleans, August 22, where he had gone on a pleasure trip. Aged 46.

Dr. Williams was a son of the late Dr. H. E. Williams. He was born near Fordyce but moved to Pine Bluff when a small boy. He was graduated in medicine from the Tulane University, New Orleans, and was associated with his father from the time of his graduation until his father's death several years ago.

He is survived by his widow, a step-daughter; one sister, Mrs. Julia Glassock of Pine Bluff; a half-sister, Mrs. E. A. Bell of Pine Bluff, and four half-brothers, W. C. Williams, Fordyce; W. H. Williams, Oklahoma City, S. V. Williams, Houston, Texas, and Capt. J. O. Williams, Fort Sam Houston, Texas, and his step-mother, Mrs. H. E. Williams, Pine Bluff.

IN MEMORIAM

Dr. J. L. Jones of Searcy died July 27, 1931, after a prolonged illness. Aged 75. He was born near Jackson, Tennessee. Attended medical school at Vanderbilt University from which he graduated in 1886, moving to Arkansas in 1894 and locating at Jonesboro. Later, he moved to Searcy where he lived for the past twenty-six years.

Several years ago he did special study in eye, ear, nose and throat after which he confined his work to that field.

Dr. Jones was one of the leaders in organized medicine in White County, serving long and well as secretary of the county society and councilor of the second district and recently was made an honorary member of the county society. Although he was doing special work, he was ever ready to champion the cause of the "General Practitioner."

He devoted much time and thought to the work of the Baptist Church of which he was a member.

Surviving are his wife, three sons, one brother, several nephews and nieces.

Dr. Jones will be much missed by every member of the White County Medical Society.

Be it resolved that a copy of this memorial be spread upon the minutes of our county society, that a copy be furnished the Journal of the Arkansas Medical Society and a copy be sent the bereaved family.

Respectfully submitted,

F. P. Hardy,
S. J. Allbright,
Committee.

Society must be made to realize that organized medicine is perfectly able to control and operate its affairs without the help of the government or other outside organizations and that it can do so to the advantage of every one concerned.—*E. Starr Judd.*

County Societies

LAWRENCE COUNTY

(Reported by H. R. McCarroll, Sec.)

The Lawrence County Medical Society held its September meeting in Imboden with Dr. W. W. Hatcher as host. Present: Ball, Guthrie, Hatcher, Henderson, Johnson, Kendall, McCarroll, Neece, Robinson and Warren. Visitors: Shields Abernathy, J. R. Hardeway, H. B. Hull, J. C. Poindexter and D. B. Rudy.

One of the striking features of the meeting was the presence of three men of the neighborhood of eighty years of age. They were: Drs. D. B. Rudy, A. G. Henderson, and P. B. Hill.

The scientific program was as follows:

"Quinzy," by T. C. Guthrie.

"Differentiation of Malaria from Typhoid," by G. A. Warren.

"Cancer," by Shields Abernathy.

At the close of the meeting a sumptious dinner was served by Mrs. Hatcher and Mrs. Annie Hill Davis, assisted by several other ladies of the town.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in Blytheville, September 9, 1931, with the following present:

Johnson of Bassett; Barrett and Barksdale of Wilson; Harwell of Osceola; Robinson of Leachville; Saliba, Husbands, Sims, Washburn, Wilson, Johnson, Tipton and Smith of Blytheville.

The visitors were: M. W. Searight, E. R. Hall and J. D. Cleveland of Memphis and Lawrence Cooper of Cooter, Mo.

The following composed the scientific program:

"Affections of the Cervix," by M. Wilson Searight.

"Treatment of Burns," by Jos. D. Cleveland.

"Congenital Syphilis," by Emmett R. Hall.

The next meeting will be held at Osceola the second Tuesday in October.

BOONE COUNTY

(Reported by W. H. Poynor, Sec.)

The Boone County Medical Society met in regular session, September 7, 1931. Visitors were: Dr. James I. Thompson, Yellville; Dr. Alvin Butt, Green Forest, and Mr. W. E. Halbrook, Superintendent of Schools, Harrison.

No scientific program was rendered, the meeting being devoted entirely to business matters. Prof. Halbrook expressed himself as being in accord with the wishes of the medical profession of Boone County.

A general discussion was held by the members of the Society in regard to the activities of the Boone county health nurse and the following resolutions were adopted:

Whereas, it has come to the knowledge of the physicians of Boone County that the Boone County nurse, who is appointed to this position by Dr. C. W. Garrison, State health officer, is going beyond her authority by engaging in the practice of medicine, and doing work that the State laws require that only one who is a licensed physician can do.

And Whereas, the physicians of Boone County, as members of the Boone County Medical Society have met in body and appeared before Dr. Garrison, and have unanimously requested that he have this nurse discontinue her activities, which are carried on under his direction, and over the protest of the county health officer.

And Whereas, Dr. Garrison has refused to accede to the request made and that the nurse in continuing as heretofore under his direction.

Therefore, Be It Resolved, by the physicians of Boone County that they do condemn the policies of the Secretary of the State Board of Health in reference to the work being done by the Boone County nurse, under his direction. And further, that we request that the Journal of the Arkansas Medical Society publish this resolution in its next issue.

(Signed)

W. T. Moore, President,
W. H. Poynor, Secretary,
J. C. Blackwood,
J. H. Fowler,
W. L. Watkins,
C. M. Routh,
D. E. Evans, County Health Officer,
D. K. McCurry,
J. D. Gladden,
D. L. Owens,
Alvin Butt,
J. J. Johnson,
G. I. Jackson,
T. P. Fowler.

Book Reviews

Normal Facts in Diagnosis.—By M. Coleman Harris, M. D., Lecturer on Physical Diagnosis, New York Homeopathic Medical College and Flower Hospital and Benjamin Finesilver, M. D., Lecturer on Diseases of the Nervous System, New York Homeopathic Medical College and Flower Hospital. Illustrated with Forty-two Engravings, some in colors. Published by F. A. Davis Company, Philadelphia. Price, $2.50 net.

This volume has arisen out of the experiences and subsequent convictions of the authors, who are steadfast in their belief that no discernment of pathologic signs can be made without a thorough knowledge of the normal.

It should prove a valuable aid to physicians, regardless of his speciality.

An Introduction to the Study of Human Anatomy.—By Robert James Terry, A. B., M. D., Professor of Anatomy in Washington University. Published by The MacMillan Company, New York.

The purpose of this book beyond the primary one of guiding the student in examining the structure of the human body, is twofold: First, to stimulate an increased interest in the study of anatomy; second, to offer to the beginner in medicine a view of the broad field of knowledge attained and of investigation in progress included in the study of the human constitution.

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Original Articles

REPORT OF A CASE OF ELECTRICAL BURN OPENING LEFT CHEST CAVITY*

HOMER ALLEN HIGGINS, M. D., Little Rock

A white child (M. O.) aged nine years was admitted to the emergency ward of Little Rock General Hospital September 28, 1930, together with her mother, who was pronounced dead on admission from the ambulance.

The history revealed that both were passengers in an automobile which crashed into a pole, supporting several electric wires carrying thirteen thousand volts alternating current of low voltage and became entangled in the wires after they had emerged from the wreckage.

The mother evidently was electrocuted immediately, although external burns were comparatively slight. Enroute to the hospital the child appeared uninjured. She sat in the seat with the ambulance driver, related details of the accident and never complained of any discomfort.

Upon examination at the hospital it was found that fourteen square inches of the left chest wall, including the fourth, fifth and sixth ribs from mid clavicular line to the mid axillary had been removed, through which the heart in action and other viscera could be clearly viewed. With each contraction the heart protruded from the window, the lung was completely collapsed and crowded into the upper posterior cavity. The pericardium was slightly burned but unopened. The diaphragm was in full view and uninjured. Cardiac contractions were moderately rapid and shock moderate only. The soft tissue forming the wall of the window was completely coagulated and ends of ribs protruded slightly. There was no evidence of bleeding from any source.

Numerous deep burns, especially of the feet, hands, knees and lower abdomen, involving a considerable portion of the body surface existed.

The exposed heart in action and other viscera of the left chest were observed and studied almost constantly, there being a gradual decline in the force and activity of the

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

heart during the fourteen and one-half hours which she lived.

She remained conscious, conversed freely and suffered no pain until thirty minutes before death when she elapsed into unconsciousness. During the period of observation a motion picture film, which is believed to be the only picture of the human heart in action, was made, together with the accompanying photograph showing the extent of the major injury.

POST OPERATIVE SEQUELA*

A. G. Harrison, M. D., Searcy

Post operative sequela like smallpox, typhoid fever and diphtheria is far easier prevented than cured. Therefore, if we would deal successfully with them it behooves us to begin at the very first visit of the patient to take every possible pre-operative precaution in order that we may steer clear of the many pitfalls which await both patient and surgeon. We should inquire very thoroughly into the patient's past and present history, his idiosyncrasys, susceptibilities and personal habits. After this, all physical infirmities should, so far as possible, be detected and a diligent effort made to correct them before operative procedure is resorted to. By no means the least important of the surgeon's duties to his patient is the proper classification of the risk. I, perhaps, am subjecting myself to much criticism when I make the assertion that by far the surgeon's greatest mortality is with the so-called "first class risk." To illustrate: I saw a man walk into one of the largest hospitals in the world and place himself in the hands of one of the world's greatest surgeons. He was kept there one week being X-rayed, fluroscoped, blood counts, blood test, urinalysis, cardiograms, in fact he was thoroughly examined by five or six specialists all of whom were experts in their particular line. After a hearty concurrence of opinion that he was an A-1 risk he was placed on the table and underwent a "successful operation," by a skilled and experienced surgeon, but he died twenty-four hours later. Now had this happened to me, only a country surgeon, I would have left this part of my paper unwritten, but those of you who have done surgery have had the same experience and those of you who have done a great deal of surgery have had it happen a number of times and I am asking you why. Is there something in the mechanism of the human machinery which is still baffling the skill of the most skillful? It does not require any great amount of skill, judgment or experience to recognize and classify the diabetic, the nephreitic, the profoundly shocked, the two extremes of life, those suffering from acidosis and toxemia, as poor surgical risk, but it seems that nothing comes easy for the surgeon, for in these cases his ingenuity is often taxed to tolerance in an effort to convert them into favorable or a justifiable condition for operation. Insulin and diet has relieved the diabetic of the horrors of the knife, external heat, morphia, cardiac stimulants, blood transfusion or saline or glucose infusions to the point of restoring the circulation of the profoundly shocked will oftimes mean the difference between life and death. The selection of the proper anesthetic will frequently tip the scales in favor of any surgical case it is certainly of paramount importance in the obviously poor risk.

While it is beyond the scope of this paper to discuss the indication for and contra-indication to the use of the various well accepted anesthetics at our command I feel that a vital means of preventing operative and post operative troubles would be seriously neglected did I not make brief mention of the importance of carefully studying each case with a view to selecting the anesthetic most adaptable to his particular needs. I have always contended that ether given by the open drop method is the safest and most universal adaptable general anesthetic but this opinion has been so severely criticised, especially by those who have a thousand or fifteen hundred dollar gas apparatus, that I frequently wonder if I am getting old, my brain too calloused to let go to the old and accept the more modern and possibly better ideas. However, I was gratified by reading in the last Year Book of Surgery an article written by Dr. Schroder of Wursburg, discussing this subject in which he said ether unquestionably heads the list of general anesthetics. Ethylene gas or its German equivalent is second but its value is greatly enhanced and its mortality materially decreased by the supplication of ether. This point I can thoroughly understand for I have frequently been told by both doctors and lay-

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

men that they could take a quart of good whiskey and cure any case of malarial chills. I immediately began to feel chilly but when I was told you had to add an ounce of quinine to that quart of whiskey before it was efficacious I warmed up without taking the remedy. Most anything will cure malaria if enough quinine is added: likewise, most anything will produce satisfactory anesthesia if enough ether is added. Chloroform is still a legitimate member of the anesthetic family, skillfully administered by the drop method on a mask covered with no more than three or four thicknesses of ordinary gauze, the fumes being at no time confined, for it is to be remembered that it is the concentration and not the amount of chloroform that kills. If the anesthetist keeps his mind and his eye absolutely on the patient, watching the pupils and the respiration carefully and conscientiously, ever alert to recognize danger signals the immediate mortality rate will be negligible. As for the remote or far off after effects my observations do not justify the expression of an opinion. Nitrous oxide gas is, in my opinion, one of the most dangerous anesthetics. It is applicable only to very short or painful operations such as extracting teeth, dilating sphincter-ani muscles and opening bone felons, all of which are so extremely painful the patient would have to be very dead indeed if the operation did not provoke respiration with an added cry. Here too, much skill for its successful administration is required for the anesthetist success depends upon his ability to asphyxiate and resuscitate the "victim" in such rapid succession that he neither has time to die nor regain consciousness. Spinal analgesia is proving a boon to the surgical patient and a convenience and luxury to the surgeon. I had intended to elaborate on this subject but since noticing on the program there is to be a paper read by Dr. White, pleading for its use in properly selected cases, I shall not tresspass on the doctors premises. The intravenous use of sodium amytal is still experimental but we hope it will prove to be all that the manufacturers are claiming for it. Avertin is being used quite extensively per rectum and we are getting quite favorable reports from Pittsburgh hospitals and from some local surgeons, but like all new agents it perhaps has found the usual number of enthusiast who fail to mention its shortcomings and far off deleterious after effects. Dr. Schroder of Wursburg says "the mortality rate is one in two hundred eighty-five, or thereabouts," which, in my opinion, is entirely too great to consider its use except in cases where all other anesthetics are positively contraindicated. Dr. Grahm, the editor of the Year Book of Surgery adds a foot note commenting on Dr. Schroders discussion in which he says "the remote after effects, like that of chloroform, is far-reaching and dangerous."

Speed is unquestionably a valuable factor in the prevention of post operative sequela but it must be remembered that without accuracy, speed is very dangerous. I would rather a surgeon would consume one hour's time in operating upon me, if he would make a clean, smooth skin incision, separate the underlying structures gently and carefully and leave no ragged edges, individualize bleeding points, catch them up and tie them without grasping all the tissues his forceps would hold and tying en masse, handle three or four inches of my bowels very tenderly, rather than three or four feet very roughly, close by bringing peritoneum to peritoneum, fascia to fascia, muscle to muscle and skin to skin: in other words even and gentle coaptation with out tension, than to complete his operation in fifteen minutes and ignore all of these well founded surgical principals.

Minor preoperative procedures are oftimes life saving. We are all familiar with the wisdom of draining the infected bladder and sterilizing it, as far as possible, before removing the prostate. This is only an example of the hundreds of other cases in which simple procedures prepares the patient to successfully undergo an inevitable operation. To illustrate further: a twelve-year-old child was brought into our little hospital panting for breath, pulse thready, irregular and could not be counted with accuracy: she could not breathe in a recumbent position, her abdomen was distended to the extreme limit, she was emaciated until she looked like a skeleton covered with skin. I saw her as they rolled her down the corridor and could think only of abdominal ascites secondary to nephritis or hepatic cirrhosis. Upon examination her blood pressure was found to be almost nil, heart sounds barely distinguishable with stethescope, there was no edema of the extremities, urinalysis showed no albumin, cast or other pathologic findings. I decided to aspirate the

abdominal contents in hopes of giving only temporary relief to the cardiac and pulmonary embarrassment. A small trocar was thrust into the peritoneal cavity two and one-half or three inches below the umbilicus in the median line: a large slop jar full of a white thick gelatinous fluid was withdrawn: the child breathed easier, felt better and the pulse improved. She was put on suppurative treatment, nutritious diet and this procedure was repeated at intervals of four or five days until four aspirations had been done. At which time the pulse was one hundred thirty, respiration greatly improved and an exploratory operation advised. A right rectus incision extending from the costal margin to pouparts ligament was made the sac was so intimately adherent to the parietal peritoneum that differentiation was impossible. A gallon or more of fluid poured out of the abdominal cavity. I introduced my hand into the opening and readily recognized a multi-occular ovarian cyst: by careful manipulation I found a line of cleavage and succeeded in separating a tumor from the abdominal wall and intra-abdominal viscera, which weighed twenty-three pounds after all fluid had been drained off. The child made a beautiful and uneventful recovery and gained twenty-five pounds in a few months. I repeated this procedure, and operated under spinal anesthesia, three months ago in a lady sixty-five years of age who came to Searcy to her sister, to die; she had been told by some eminent physicians in nearby cities that she had cirrhosis of the liver with an associated dropsical condition and nothing could be done except to tap her at intervals for temporary relief, as long as she might live. This patient, a Mrs. Bruffey, is well, happy, hearty and one of the most grateful friends I ever knew.

Is the sin of omission greater than that of commission? There is an old saying in doing abdominal surgery, especially for appendicitis, "when pus runs surgeons run." I, no doubt like many other text book surgeons, followed this rule for a number of years. Very recently I read a lecture delivered by the distinguished Dr. Crile, of Cleveland, before the graduate medical school at Washington University, in which he said there is as much in knowing when to quit as in knowing what to do. He said in operating for gangrenous gallbladder, make a simple incision over the tenderest and most prominent point: go down gently and carefully until the gallbladder is reached, put in simple drainage and quit. I grant you no better advice could be given but he went on to say that the same rule was applicable in suppurative appendicitis and said never to remove a gangrenous appendix. It is certainly unbecoming of me to take issue with so great a man as Dr. Crile and I would be far from doing so if my personal experience supported by some very good authority did not justify my contention. A few years ago I was attending a medical meeting in Hot Springs and heard Dr. Kennedy deliver an address on the Acute Abdomen in which he advocated evisceration: never leave a nasty gangrenous appendix in the abdomen. I thought at the time that even though he was a very noted surgeon and teacher that his teachings in this particular case was little less than criminal. I had operated upon two children just before leaving home, following the old rule establishing drainage and leaving the appendices undisturbed. I got home just in time to see them both pass away and the families look at me askance: wondering had too little been done, too much been done or was it God's will that these little ones be taken. Gentlemen, it is my candid opinion that too little was done. My mortality rate had not been satisfactory in these cases so I made up my mind that in the future I would follow Dr. Kennedy's plan of evisceration in all cases. I have made a very few exceptions to this rule and if you should ask me what prompted these exceptions I could not tell you. I merely followed the dictates of my judgment. It is certain that if one has to begin at Treitz' ligament and search the jejunum, proximal and turminal ileum to the secum, trace the sigmoid up to the descending colon, the descending colon up to the transverse colon, the transverse colon to the hepatic flexura and the ascending colon down to the secum in an effort to locate the appendix it is far better never to have operated. Since adopting the evisceration policy my mortality rate in these cases, which numbers more than one hundred, has been reduced seventy-five per cent.

When shall we operate? Shall we remove hot pus tubes? I shall make only this comment: I have never seen a pus tube case that did not cool off to a point where an operation could not be done with safety and I have never seen a case die where a skillful opera-

tion had been done at the proper time. A few years ago there lived, at Chicago, two of the world's greatest surgeons: Doctors A. J. Oschner and John B. Murphy. Dr. Oschner made a rule that if the acute appendix case was not operated within thirty-six to forty-eight hours to defer the operation for one week. Dr. Murphy made a rule to operate upon all cases immediately, regardless of the severity or the duration of the disease. There are, no doubt, many surgeons today who are following each of these rules and perhaps with a fair degree of success. If I was going to follow either of them I would select Dr. Murphy's plan of immediate operation. However, there are exceptions. Granting you there are some cases in which there is never a favorable time but there is always a most favorable time to operate and if we will recognize and take advantage of it our mortality rate will be greatly decreased: for of all trades, professions and occupations horse sense and good judgment serve the surgeon the greatest purpose.

DISCUSSION

DR. THOMAS DOUGLAS, Ozark: I think if Dr. Harrison had time enough he could deliver a first rate sermon on the subject of general surgery. What he remembers of his lost paper is an important, entertaining and interesting contribution to the subject. I think he who uses chloroform with any degree of regularity will sometimes be scared to death if he doesn't have a fatality.

Dr. W. A. SNODGRASS: I like to give chloroform. One reason for giving it is that it is the most pleasant anesthetic you can administer. In careful hands there is very little danger. I like to give it followed up by ether, if it is a prolonged operation, and if you are instructed in the administration of chloroform you will have just as few deaths from it as from any other anesthetic. I spent some time in England several years ago. They administer chloroform altogether there and never saw any bad results from it. Instead of using six folds of gauze over the mask, they use two and they give it very slowly. If you take the physical properties of chloroform as compared to ether, you will find chloroform vapor is seventy-two times heavier than air. If you put too much chloroform on your mask you crowd the air out entirely and your patient is breathing pure chloroform vapor (which will kill anything but a cat).

DR. L. V. PARMLEY, Little Rock: I enjoyed the doctor's paper very much. There was a lot of good common sense in it.

I want to compliment Dr. Harrison on his defense of chloroform. It has been a long time since I have heard the modern surgeon uphold this old friend. While I was an interne in St. Vincent's Infirmary the choice of anesthetics lay between ether and chloroform. At that time we still had a few surgeons who preferred chloroform occasionally. I don't think I have ever observed any ill effects from the use of chloroform properly administered. In fact I have never known of a death that could be attributed directly to this drug used as an anesthetic. I use it in children, occasionally, and like it better than ether, ethylene or nitrous oxide, in the reduction of simple fractures such as colles and green stick fractures of the forearm. I like it because complete relaxation may be obtained quickly and because the effects of short chloroform anesthesia wear off quickly. There is not much danger, if any, from chloroform in the proper hands. However, it is hard to find the proper person now-a-days for the simple reason that the younger men have been taught to fear it. The deleterious effects from chloroform anesthesia lies in concentration resulting in changes in blood chemistry. When the laboratory presented these phenomina to the profession a general cry was sounded against chlorofrom. Until that time no one worried about it and chloroform was an excellent anesthetic agent. Personally I think the profession has given it up too quickly.

I do not care to discuss the use of chloroform in abdominal or general surgery because I am not a general surgeon, but I do like it in the reduction of simple fractures in children under certain circumstances.

THE SURGEONS' PROBLEM IN GAS GANGRENE*

L. Vallette Parmley, M. D., Little Rock

The object of this paper is a plea for radical surgery in gas gangrene of the extremities with due consideration for the patients future regarding amputations.

The great majority of gas gangrene cases are found in individuals who depend upon their arms and legs, more or less, for a livelihood. It is rare in the moneyed or professional classes for the reason that they are not subjected to the injuries found in the laboring class. And, by the same token, the fellow in the smaller lighter car is more liable to serious injuries than the man in a strongly built car.

Gas producing bacilli depend upon inoculation, for entrance into the body, and upon certain very favorable conditions for propagation. But once a foothold is gained the rapidity with which the disease progresses is almost beyond logical reasoning. Think of the reported cases wherein positive evidence of gas gangrene is found within a period of four hours after the wound was received, and of the deaths which have occurred within twenty-four hours after the patient was rushed to the hospital with a compound fracture, and

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it is not hard to visualize what a serious problem the question really is to the surgeon!

But those are not the cases I propose to deal with in this paper, because death is almost a foregone conclusion before any logical treatment can be instituted. Occasionally there is an exception. The cases I desire to discuss are those in which gas gangrene begins to manifest itself in from twelve to thirty-six hours or longer. Then the problem is whether or not to amputate. In this connection many things are to be considered. Among them, the patient's ability to withstand a heavy, prolonged toxemia, location and type of the wound, his occupation, intelligence, number of dependents in his family, financial circumstances, and his personal desires in the matter.

The patient's problem, though he doesn't usually know it, is the question of his surgeon's fearlessness and bull-dog tenacity. To perform an amputation all that is required is a fair knowledge of anatomy and technique together with a half-hearted decision to do it. But real courage is required to fight this condition in its own element and upon its own terms.

Gas gangrene, however, will test the courage of any surgeon, because the fear and dread of it has been drilled into him since during his student years, and unless he is frankly familiar with the consequences he can hardly be blamed for taking what he conceives to be the safest way out of the case. The greatest tragedy that can occur, in the management of these cases, is to become too concerned and amputate early in a suspected case only to find, upon the study of the amputated part, that after all, gas bacillus infection did not exist. I saw that happen to a promising young surgeon, a few years ago. The tragedy was twofold for the young man gave up surgery entirely.

The gas bacillus has a peculiar predilection for muscle tissue, thus placing the skin infection in a secondary position. Therefore the most likely places for these infections are the locations of the larger muscle groups such as the calf of the leg, thigh, buttocks, anterior chest wall, upper arm and forearm. This may be partially explained by the exceptional susceptibility of necrosed tissue to any type of infection, and no tissue undergoes necrosis so rapidly as muscle. And, of course, it is a well known fact that gas organisms propagate readily and the disease extends rapidly in the presence of the myosinogen in muscle tissue.

Vincent says, experimentally, the bacillus perfringens and the vibrion septique each may multiply alone in the muscles, but the association of these organisms gives them an activity and a toxicity of still greater magnitude. And, if to these bacillus sporogenes be added, the phenomen of gaseous gangrene may be readily produced.

Lande reports three cases of gas gangrene infections following subcutaneous or intermuscular injections. He assumes that the infection was carried on the patient's skin. Twenty-six other similar cases are on record, eighteen in which caffeine was injected.

Next in susceptibility is blood tissue. Where is there a better culture media than the blood lakes in and surrounding a third or fourth degree wound of any type? Our war-time writers declared that a compound comminuted fracture complicating a gun shot wound was the most susceptible of all wounds to gas infection. I believe that is true, for in no other type of wound will we encounter such large blood lakes and muscle destruction.

The hemorrhage which is often found extending beyond the area actually involved, together with the discoloration of the subcutaneous tissues in these extended areas is not a true extension of the infectious process, but rather the result of biochemical changes from the toxins. However, these areas must be watched continuously because this intoxicated tissue is somewhat divitalized and therefore ready to receive infection.

The early symptoms of gas gangrene are similar to those of any other acute type of infection, and bear a direct relation to the size, location and nature of the wound. The edema is usually localized and due, primarily, to trauma; later it becomes the etiological factor in the development and extension of gas infection. The general symptoms are headache, malaise, rapid pulse, slight fever and continuous severe pain which seems out of proportion to the extent of the wound. The peculiar odor is hard to describe and hard to forget. Wan Fu-en says it is pathognomonic, being always present.

The secondary stage, which may develop any time from within a few hours to several days later, is characterized by the production of gas in the tissues, palpable crepitation, successive crops of bleb formation, increase in

the reddish-brown watery discharge and rapid extension of the edema, carrying with it the suspended bacteria, reddish-brown discoloration of the tissues and skin followed by sloughing of the tissues and sometimes the skin, and increased severity of the general symptoms. In the terminal stage the patient becomes restless, pulse feeble, has cold sweats, and a profound toxemia is manifested and death ensues.

Every wound has a potential gas gangrene possibility. Consequently the condition must be always borne in mind. The diagnosis is usually easily made from the symptoms and appearance of the wound.

X-ray evidence is essential. Rhinehart says the roentgenogram is probably the most reliable early evidence. To this I desire to add that positive roentgenological findings must not constitute the sole basis for diagnosis. The clinical findings must be also considered in planning the conduct of the case.

Contrary to the general opinion the prognosis is not always grave. However, it depends somewhat upon the location and type of wound, extent of tissue destruction, whether or not the large vessels are involved, and the length of time that elapsed between infliction of the wound or wounds and primary treatment.

Wan Fu-en advises that as soon as the diagnosis is made the patient's blood should be typed and a donor, preferably a relative, secured and held in readiness for a transfusion.

Naturally the primary treatment is the same as that of any wound. But when the condition has became clinically established the treatment becomes radical. Drainage, and plenty of it is, I believe, of first importance.

Gas gangrene is essentially an affection of traumatized muscles. Therefore it is important to remember that it is unlike any other type of gangrene. Occasionally there is mass gangrene of the entire part due to occlusion of one or more of the larger vessels. In these cases a line of demarcation forms and high amputation is imperative.

But in the usual case the gangrene occurs in the tissues—at the other end of the line, so to speak. Complete epluchage of this necrosed tissue is also imperative. But I do not believe it is often necessary to amputate all of the good tissue of a part, for the sake of disposing of a comparatively small amount of gangrenous tissue simply because that gangrene is due to gas bacillus infection.

Moreover there are very few stumps which do not bear an active gas bacillus infection or gas gangrene following amputation. In these cases the fight is not lessened appreciably except in those in which there is an overwhelming toxemia. The question of drainage above the stump is the same as that in the affected part before amputation. Often the shock of an amputation in an intoxicated patient is terrific, thus adding to the seriousness of the situation.

Dickinson and Traver quote Van Buren, who has laid down the following rules for the treatment of gas bacillus infection:

1. Operate as early as possible under nitrous-oxide anesthesia, if you can.

2. Prepare the part with the least amount of trauma and delay.

3. Avoid tourniquets for obvious reasons.

4. Make incisions longitudinally and one-half again as long as you think they need to be both in skin and fascia, but leave as much skin as you dare in your epluchage.

5. Go between, rather than through normal muscles, but open the wound as thoroughly and as freely as you possibly can.

6. Excise all torn, crushed, discolored, non-contractile muscle until you have left only that which is normal in color, firm and which bleeds readily.

7. Make a careful search for and remove all loose bone and foreign bodies, especially clothing and blood clots.

8. Stop all bleeding leaving the wound well open and separate its walls with wet gauze, laid in, not packed in.

9. Use Carrel tubes, plenty of dressings, and make careful splint fixation.

10. Do all this as rapidly as you can.

To this Dickinson adds: Amputate when the toxemia seems to be overwhelming.

With reference to serotherapy, Dickinson, and Traver, in their notable contribution to the literature on this subject, said, "Surgical treatment is supplemented by serotherapy, but serotherapy can not replace surgical treatment. Since the infection is usually a mixed one it is important to use a polyvalent serum, both for prophylaxis and treatment. The prophylactic dose is from 30 to 60 units intravenously or intramuscularly, and when

gas gangrene has developed 60 to 100 units intravenously every four to six hours, given very slowly—5 c. c. per minute." They report excellent results.

In searching for some sort of an antiseptic with a view to sterilizing the wound after early drainage, Pilcher concocted a solution which he termed quino-formal solution. He claims that the free instillation and infiltration of this solution sterilizes the entire wound and has no deleterious effect on the tissues. He uses it with the Dakin tubes and technique. When the infectious process has been checked he follows with the Dakin solution. He reports excellent results.

David H. Kling reports the use of normal horse serum intravenously with fair results.

Nils L. Kerhoff, of Guy's Hospital in London, reports a series of thirteen traumatic cases of gas bacillus infection, in the extremities as follows:

Eleven were amputated—five died and six lived. Two of those that lived were amputated immediately upon entrance to the hospital and twenty-four hours before gas infection developed in the stump. One died in sixteen hours after entrance. This was the only case which was not given the serum. One lived without amputation but with adequate drainage and the use of serum.

Kerhoff's report of this case is noteworthy: Two months after fracture occurred in shafts of both bones of the right forearm, the patient was readmitted for open operation because of nonunion. Within thirty hours evidences of gas gangrene were present. Crepitation was freely elicited all over the forearm. Pulse 150, temperature 105 degrees.

Here I quote Kerhoff: "It was thought that, in spite of the acuteness and severity of the infection, every effort should be made to save the right arm of the young man. Multiple incisions were therefore made into the limb, and much gas and evil-smelling blood-stained fluid escaped. Hydrogen peroxide and flavine irrigations were freely used, and Carrel-Dakin tubes inserted. A. G. G. S. was given in the arm and intravenously. The patient rapidly improved and left the hospital five weeks later."

It will be noted that more than fifty-five per cent of his cases amputated for gas gangrene died and that the one case which had been given radical treatment without amputation recovered. I am inclined to think that a fair percentage of the others recovered in spite of amputations.

The following is a brief report of my own series of eleven cases of traumatic gas gangrene in the extremities:

Case 1. March, 1925. A lad fourteen years of age received a superficial wound on the medial surface of the right foot about thirty-six hours before I saw him. There was much swelling, great pain and a rapid pulse. Slight pressure about the wound forced a watery discharge containing gas bubbles. The characteristic odor was present.

Multiple longitudinal incisions were made at once. The muscles were gangrenous. Continuous wet dressings, using 1:2500 Dibromine solution, were prescribed. A. G. G. S. was not available.

Four weeks later the proximal end of the metatarsal sequestrated and was removed.

Recovery was uneventful though a partial ankylosis of the tarso-metatarsal region resulted.

Case 2. July, 1925. A farmer, age twenty-eight years, received a deep wound of the outer surface of the right leg six days before he came under my supervision. A definite line of demarcation had already formed about six inches below the knee. The patient was very sick. The toxemia was terrific!

An amputation in the middle third of the thigh through a circular flap incision was performed on the spot. The wound was not sutured. A light chloroform anaesthetic was used since it happened to be the only anaesthesia material either my colleague or myself had in our bags. And it was twelve miles over muddy country roads to the nearest source of supply.

Examination of the amputated leg revealed a thrombosis of the popliteal artery. There was little gas in the tissues above the line of demarkation but the tissues below were full of it.

This patient died eight or nine hours after operation, and I was severely criticised by his relatives and friends for not closing the wound tightly.

Case 3. October, 1925. A farmer and trapper was scratched by a bob-cat in several places over the left forearm eight days before a doctor was called. The patient was unconscious and in a dying condition.

The arm was greatly swollen but no crepitation was noted. The wounds were sealed over and there was no drainage.

While I was preparing to operate the patient died. However, gas was suspected and I made an incision along the line of one of the scratches. Much watery, sero-sanguinous fluid and gas escaped. The odor from this escaping fluid filled the whole house, and magots could be seen working in the wound. Evidently the gas was deep seated in the muscles. I have always thought that magots required air. I cannot account for their existence in a closed wound.

This is the only case in which I admit a doubtful diagnosis.

Case 4. April, 1926. A negro man age thirty-six years, received a gunshot wound of the left thigh from a .45 caliber army automatic. A compound comminuted fracture of the middle third of the femur resulted. He was operated within three hours and the bullet together with several pieces of clothing and fragments of bone, was removed. Soft rubber tube drainage was left in the wound. He was given A. T. S. but no A. G. G. S. was available.

Twenty-eight hours later a diagnosis of gas bacillus infection was made from the odor of the characteristic discharge, great pain and swelling and deep seated gas crepitation.

Adequate drainage was established through multiple longitudinal incisions and wet 1:5000 Dibromine dressings and irrigations were used. He made an uneventful recovery, and left the hospital twelve weeks later with a good firm union but one and one-half inches shortening.

The interesting thing about this case is the fact that union seemed to be taking place during the progress of the disease. A Thomas splint with a Pearson flexion attachment was used for fixation and left in position throughout the treatment.

Case 5. June, 1927. A young woman, twenty-two years of age, received a compound fracture of both bones in lower third of the left leg in an automobile accident about 9:30 p. m. She was removed to her home and I was called. I was forced to treat her in her home because of being hemmed in by flood waters which still obstructed traffic in places. X-rays were not available, of course.

Gas infection was suspected about twenty-four hours later. Twelve hours more and there was no doubt about it.

A Hodgen leg splint was used throughout the treatment, which was about the same as that of the above case. She had a severe toxemia but recovered. Union was delayed somewhat and four months passed before firm union was established. A partial ankylosis of the ankle joint resulted. A. G. G. S. was not available.

Case 6. August, 1927. A mulatto, age thirty-one, shot himself accidentally through the palm of the left hand with a shot gun. Amputation at the wrist was performed at my office about three hours after infliction of the wound. There was no evidence of gas infection at that time. Owing to bad weather and fourteen miles of impassable roads, I did not see the patient until the fourth day. From the history, I concluded the gas infection took place from within twenty-four to thirty-six hours afer amputation. The entire arm was affected and crepitation was felt even over the left pectoral region.

Multiple incisions for drainage were made but to no avail. The patient died on the sixth day after infliction of the wound.

I believe this patient's life could have been saved by early radical drainage.

Case 7. January, 1928. A negro, aged about twenty received several punctured wounds in both arms and one in the left pectoral region by a knife, seventeen days before he was brought to my office on an army cot in the bed of a Ford truck. Another doctor had made a small incision in either arm for drainage. Magots were present in both of these wounds. There was no doubt as to the diagnosis for all of the symptoms of gas gangrene were present. The patient had been unconscious two days and died about two hours after arrival at my office.

Case 8. March, 1929. An oil well rig worker, aged twenty-six, received a crushing injury of the left hand which necessitated the amputation of the two outer fingers at the carpo-metacarpal joints.

Evidences of infection developed within twelve hours which is early for ordinary infection. However, gas was not suspected for thirty-six to forty hours after that. Then crepitation was elicited over the dorsal sur-

face of the hand. Release of the sutures allowed the usual watery foul-smelling discharge to escape. One incision was made over the dorsum of the hand. A diagnosis of gas infection was made.

The patient was never very sick, there being only three days following drainage that he could not come to the office. On the sixth day there was considerable sloughing with much gas, but there was no extension up the arm. Recovery was complete in from three to four weeks.

This is the mildest case of gas infection I have ever seen, and I feel certain of my diagnosis.

Case 9. February, 1930. A white man, aged seventy-six, entered the hospital with a history of having received a superficial wound of the left foot, twenty or twenty-one days before. The X-ray diagnosis was osteo-myelitis of the tibia.

I was called in consultation to do the operation a few minutes before the operation began. In fact the patient was well under the anaesthetic and draped when I entered the operating room. Slight crepitation in the tissue about the ankle could be felt through the sheets. Amputation was not permitted by his relatives. Incision revealed no gangrene of the tissues of the leg, but the muscles were a greyish-red in color resembling cooked meat. When we got down to the bone it was plain to be seen we were not dealing with an ordinary osteo-myelitis. As the chisel entered the medullary canal, a hissing sound was plainly heard and the odor of the escaping gas was sickening. A large window was made in the bone and the wound left open.

This patient died sixteen hours later.

Case 10. October, 1930. A white boy, aged sixteen, entered the County Hospital about twenty hours after receiving a compound fracture of both bones in the middle third of the left leg. The skin wound was very small resembling a punctured wound. The X-ray film, made several hours later, revealed a small gas pocket beside the tibia internally. The early cardinal symptoms of gas gangrene were present.

During the operation a complete epluchage was done and a Lane plate applied to the bone. Other incisions for drainage were made. There was considerable necrosed or gangrenous tissue removed. All wounds were left open.

He was given both A. T. S. and polyvalent A. G. G. S. as a prophylaxis upon entrance into the hospital. As soon as the diagnosis was made he was given large and frequent doses of the serum. Dibromine 1:5000 solution was used in dressings and as irrigation.

The culture proved negative.

The patient left the hospital nine weeks later, but returned for the removal of the plate four months after operation. At this operation a sequestrum of the tibia was removed with the plate, and union was firm and function excellent.

A Thomas leg splint was used for fixation throughout.

Case 11. November, 1930. A negro, aged forty-three, entered a negro hospital with a compound fracture of both bones in the lower third of the right leg. Splinting and first aid was rendered by the doctors at the hospital. I saw him forty-eight to fifty hours later. An active gas infriction was in progress. Gas crepitation, odor and all other signs were present.

At operation one small fragment of the tibia was removed along with much gangrenous material. Multiple drainage incisions were made. A. G. G. S. was pushed in large and frequent doses—100 units every four to six hours. The drainage seemed adequate and the toxemia decreased with the use of the A. G. G. S.

At the end of three weeks the watery discharge had changed to pus. There was a great deal of sloughing, but union was beginning. At the end of seven weeks union was good, but not firm. The plate was removed and curettement of small sequestrations was done.

The patient walked out of the hospital with the aid of a crutch and cane, March 16th of this year, with a sound leg.

Normal saline was used in this case instead of dibromine for dressings and irrigations. A Thomas leg splint was used throughout the treatment.

I have about arrived at the conclusion that none of our present antiseptic solutions are of any great value. Anything, even normal saline, that will absorb the exudate and is not irritable to the tissues will serve the purpose, both in irrigations and loose wet packs.

The first eight of my series of cases were handled in the country twenty-five miles from a hospital, and under the most adverse condi-

tions. Some of them I saw very late in the course of the disease.

Until a few years ago the rule was to amputate high above the involved area as soon as the diagnosis was made, but Frankau and others, substantiated by reliable statistical data, have shown that adequate drainage and proper systemic treatment plus sero-therapy gives a lower mortality, with less mutilation.

Gage says that free incision gives better results than primary amputation in those cases in which the whole limb is not involved.

One can do an open reduction, at the time of epluchage, with a very little more time and perhaps give his patient a better limb when final recovery takes place. If it becomes necessary to amputate, the previous reduction makes no difference.

When amputation is decided upon most surgeons recommend the guillotine type. This seems to be entirely logical both from the standpoint of time under anaesthesia and accessibility for drainage and treatment of the stump.

In the last analysis the management of a case of gas bacillus infection or gas gangrene is essentially that of any serious progressing infection and not the great surgical bogey we have been led to believe.

Summary

Amputation should be considered in the individual case rather than as a rule of early or primary procedure.

Reliable statistical data does not show that amputations lessen the mortaliy rate.

Adequate drainage plus sero-therapy using the polyvalent Anti-Gas Gangrene Serum seems to be the most logical basis upon which to plan the management of these cases.

As yet no reliable antiseptic solution has been offered to the profession upon which any great dependence may be placed.

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DISCUSSION

DR. W. A. SNODGRASS, Little Rock: I have enjoyed Dr. Parmley's experience very much. I had a lot of experience with it myself. I am led to believe that the infection is on the increase. I remember before the war I did quite a lot of traumatic surgery and only saw probably half a dozen cases of gas gangrene, but we had a lot of it in the army. I, too, believe the best result is due to the drainage and not to the antiseptic used. So far as the vaccines and the serums are concerned, I have had very little experience with them. But you have got to go in boldly and get drainage. I remember along towards the last of my experience in the army we had to almost skin a fellow to open up a case of gas infection. I fell out with the use of the Dakin-Karrell solution. It is too irritating. The theory of the use of the Dakin solution is the generation of chlorine gas into the tissues, and if you haven't got an intelligent nurse who knows how to apply it, you can throw all the tissues out with the Dakin solution.

We did the guillotine amputation. I would always do a guillotine amputation; do a complete circular amputation and let the bone stick out, because the infection always travels up the lymphatics and near the bone. You will find the gas gangrene extending all along the big vessels in the limb long before it shows its appearance on the skin. Therefore, we get fooled in making a diagnosis before getting a crepitation. And if the fellow is muscular you can't find any crepitation, if you open up the limb you will find discoloration and the sloughing begins.

I find they have been injecting oxygen into the tissues. I haven't had enough observation to give an opinion on it. I don't know whether oxygen causes destruction of the tissues or not but I believe the proper thing to do is to get the opening free and keep the tension off the muscles and give as much expansion as possible and handle it very little.

I don't believe in early amputation. We did a great many of them and had a great many deaths, but if the man can overcome the toxemia—its a self-limited disease—it will run its course in a few days. The acute part of it runs from three to five days; and if you keep the patient alive, even if you have a black leg above the knee, you can do an amputation later and probably save his life.

D. A. RHINEHART, Little Rock: The earliest possible detection of the presence of a gas-bacillus infection is of the greatest importance. Probably the first positive sign is the finding, on an X-ray film, of shadows cast by the gas in the soft tissues around the wound. All roentgenograms of injuries in which the skin is punctured or broken should be examined with the idea of a possible gas infection in mind. The earliest clinical symptoms and signs are pain out of proportion to the extent of the injury, a copious serosanguinous discharge, and the appearance in the wound of small bubbles of gas expressed by massaging the tissues around the wound.

Last fall I reviewed the records of the patients that had had a diagnosis of gas gangrene in four

Little Rock hospitals. The results of this study will appear in the Southern Medical Journal. There were thirty cases in the series, ten caused by compound fractures, ten by gunshot injuries, and the others by penetrating and lacerating wounds. The earliest diagnosis were made with the X-ray, varying in time from two and one-half to seventy-two hours, an average time of about eighteen hours after the injury. Nineteen of the cases were diagnosed clinically in an average time of fifty-four hours. Different forms of treatment were used. Of the nineteen patients diagnosed clinically, ten died and nine recovered; of the eleven diagnosed by X-ray, two died and nine recovered. This shows the advantages of early diagnosis with the treatment of the infection before gangrene has begun.

I would suggest that all X-ray films of injuries in which the skin is injured or broken be examined for the presence of the shadows of gas. The appearance is quite characteristic. Reproduction of a number of the films that we have taken are on exhibition in the Scientific Exhibit.

DR. JOSEPH SHUFFIELD, Little Rock: I appreciated Dr. Parmley's paper very much and Dr. Rhinehart's report. There are just a few things I wish to state. Amputation, I think, has been stated clearly, and your mortality is always high. Your patient is badly shocked, not only by the injury but by the toxicity of the infection. Then you add more shock by the amputation, and often your patient will not recover.

As to free drainage, your incision should extend from the origin to the insertion at least of the group of muscles involved, and probably more.

As to irrigation, I think you are exactly right. You should not try to use Karrell-Dakin's method or any other irrigation method without giving Orr's method. If you want a book that has got more sound sense on drainage in a few pages, read Dr. Orr's book. He lays the tissues wide open, and packs vaseline gauze, which is not irritating, and puts it in well to depth of fascia plasm. The gauze doesn't shock because it extends from one end of the incision to the other and you can't help but get free drainage at all times without pain to your patient.

Another thing is rest, which was brought out in several papers today. Rest is one of the greatest things you should try to furnish your patient. For compound fractures make the patient's extremity comfortable. Fix it after deformity has been corrected so that it will not wobble to produce pain, and too, if patient overcomes the disease you will not have to refix the fracture, which means much quicker recovery and avoids the second course of pain and shock. You will not only get rest to the member injured but to the whole body.

As to the serum, it can be had almost anywhere if you will just put forth an effort to see that it is in your community. If you wait until the patient gets hurt and then try to get it, you will have a lot of trouble. I think I was the first man in Arkansas to use that serum, so far as I can find out. The serum wasn't distributed over the country at that time, but today you can get it and keep it in your community, and it should be in every community so that it can be used as a prophylaxis and not so much as a therapeutic agent. Of course, it is good for therapeutic use, but give it just as routinely in these compound fractures, gunshot wounds or any other injuries in which the muscles are traumatized, as we give tetanus antitoxin.

As to the X-ray diagnosis, I think Dr. Rhinehart possibly is mistaken in his time element. He is correct so far as his reports are concerned but, if all cases are X-rayed early, I believe you will find the diagnosis in time by X-ray is much lower than 18 hours. Of course, odor and all the other symptoms are present also.

Dr. Parmley's diagnosis I doubt in the case of the old man with infection in the medullary canal. He is a good friend of mine. The gas bacillus is not the only germ that can produce gas. The B. coli is more than likely what he had. That was in the interior of the bone, according to his statement, and not in the muscle tissue. Is that correct?

Dr. Parmley: He had gangrene of the foot. He had crepitation down in the foot.

Dr. Shuffield: Was it proven by laboratory test?

Dr. Parmley: Yes, in the General Hospital laboratory.

Dr. Shuffield: I accept his diagnosis and withdraw my doubts. He mentioned using plates in one of his cases and yet he read in his report of the standard treatment by removing all the foreign material. I don't think he is right in putting a plate on in these cases, and I don't think he will do it in the future. I don't think we should do it. You take out all the dead bone, pieces of bone that have lost their blood supply, because they are foreign material. Why put a plate in there?

To relieve your pain, use a splint, and do your external fixation and not internal fixation with foreign material.

DR. FRED. H. KROCK, Fort Smith: It has been our misfortune in the past year to have had three cases of gas gangrene, all proved by laboratory tests. Two of the cases were compound fractures of the ankle and the third an extensive laceration of the calf of the leg produced by a gear wheel. All cases had specific serotherapy. All cases were widely opened, drained, and Dakinized. One case recovered without further treatment. The other two cases had guillotine amputations below the knee and they also recovered. In one of these cases an X-ray was made before the amputation to see how high the gas had extended. Amputation was made above the level of the gas but the gangrene recurred necessitating an amputation above the knee. I think that certainly the problem of the treatment of gas is greatly simplified by an early diagnosis which has been made possible by the X-ray as brought out by Dr. Rhinehart. Treatment can be instituted in the first few hours instead of waiting fifty hours for a clinical diagnosis.

We still have a lot of faith in Dakin's solution before and after amputation, if properly applied. Another thing we learned in these cases was that you can get a satisfactory stump for an artificial leg after a guillotine amputation by applying adhesive traction within forty-eight hours after the amputation for seven to ten days and then applying to the stump a boot made of modified Unna's paste with four traction straps incorporated and a traction of three to five pounds for three to six weeks. This is the most satisfactory means of applying traction to the stump that we have discovered. The ends of the bone will be covered with muscles and soft tissue and the area of granulation tissue reduced to two to three centimeters by the skin being drawn over the end of the stump. Both cases are wearing artificial limbs now with comfort without the necessity of further operative procedures.

DR. PARMLEY, in closing: I thank the gentlemen very much for their generous discussion of my paper.

I wish to emphasize again that the first eight of my cases came in the course of a country practice, and in defense of my diagnosis I desire to state also, that I am thoroughly cognizant of such criticisms as may arise because of the absence of laboratory verifications. With that thought constantly in mind I was particularly careful in arriving at a diagnosis. The cardinal clinical symptoms were present in every one of these cases. In looking back over those five years of country practice I think I may have erred in not diagnosing two or three cases that may have been gas bacillus infection, rather than have erred in the diagnosis of these cases reported.

Heretofore all gas gangrene cases which have been reported have been taken from well regulated hospitals under the care and management of well known surgeons. The country doctors' cases have never before been discussed, so far as I know. I would inform you that the country doctors' management of gas gangrene cases must necessarily be a great deal different from that of a city surgeon for the very obvious reasons mentioned in the cases I reported, and still his mortality rate is equal to that of the surgeon's.

In confirmation of Dr. Rhinehart's remarks I will say that the first intimation I had of gas gangrene, in the case I used a plate on, was through his interpretation of the roentgenogram. His diagnosis was verified shortly after at operation and by virtue of this early diagnosis this lad has a good leg today. I heartily agree with Dr. Rhinehart in his contention concerning the roentgenogram in gas bacillus infection.

Dr. Shuffield's point, in criticism of the use of the Lane plate in these cases is well taken, but after all, there is no other way to maintain apposition and if amputation becomes imperative it is no more trouble to amputate the part with a plate on the bone than without. I think I will continue attempting open reductions in the face of gas gangrene infection until I am thoroughly convinced it is futile.

I am especially glad to hear Dr. Krock's experiences with the guillotine stump and adhesive boot traction. Every one of those stumps is a problem in itself. Frequently it is necessary to amputate higher up in order to obtain a serviceable closure. His experience is worth a great deal.

Now I have attempted to dispell, to some extent, the fear that every surgeon has of gas bacillus infection. I firmly believe that too many amputations are being done in the name of gas gangrene, and, if through this paper, I have strengthened the courage of a single surgeon in the treatment of these cases, then the result has warranted the effort in preparing it, and your generosity in listening to it. I thank you.

Book Reviews

Gonococcal Infection in the Male. By Abr. L. Wolbarst, M. D., Urologist and Director of Urologic Clinics. Beth Israel Hospital; Consulting Urologist, Central Islip State Hospital. Jewish Memorial Hospital and Madison Park Hospital. Second Edition, completely revised and enlarged, with One Hundred Forty Illustrations, including seven color plates. Published by The C. V. Mosby Company, St. Louis. Price, $5.50.

In this book, particular emphasis is placed upon diagnosis and therapy; the bacteriology and pathology of gonorrhea.

In the treatment of acute gonorrhea we quote the author's personal experiences with pyridium as an adjuvant to local treatment. "In male gonorrhea, there is a decided amelioration in the subjective symptoms shortly after the administration of this product; in posterior urethral invasion with prostatic involvement, pain is relieved and urinary frequency restored to normal; the urine has cleared much more quickly in the cases in which it has been administered, in both acute and chronic cases; and with the disappearance of the pus there has been a corresponding disappearance of the invading organisms."

Intestinal Toxemia (Autointoxication) Biologically Considered. By Anthony Bassler, M. D., F. A. C. P., Consulting Gastroenterologist, St. Vincent's, Peoples' and Jewish Memorial Hospitals, New York City. Author Text Books Diseases of the Stomach and Upper Alimentary Tract, and Diseases of the Intestines, Liver, Gall-Bladder, Pancreas, and Lower Alimentary Tract. Illustrated with 16 Text Cuts. Published by F. A. Davis Company, Philadelphia. Price, $6.00 net.

The author of this book gives his conclusions of over five thousand cases that he has treated in the past thirty years. Of unusual interest is the chapters on "The Intestinal Organisms and Bacterial Treatments." The book contains twenty-six chapters and all give a wonderful description of Intestinal Toxemia—Biologically considered.

SOUTHERN MEDICAL ASSOCIATION

November 18-20, 1931

NEW ORLEANS

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

INDISCRIMINATE CONTRACT PRACTICE

The American Medical Association, through its Judicial Council and through its House of Delegates, has on more than one occasion condemned indiscriminate contract practice as being unethical and as being detrimental to the public welfare. In similar manner in resolutions adopted by the House of Delegates, the Association has recorded itself as opposed to the practice of medicine by departments of public health.

Principles of Medical Ethics of the A. M. A.:

> *Sec. 2, p. 19—It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession.*

The Judicial Council has taken the position that contract practice is not *per se* unethical but that every contract must be judged on its own merits.

The component county medical society has original jurisdiction with respect to the conduct of its own members in entering into undesirable contracts. Jurisdiction lies next in the constituent state medical association concerned.

Abstract

SHOULD THE INTERNIST KNOW SYPHILIS?

Loyd Thompson, Hot Springs National Park, Ark. (Journal A. M. A., October 3, 1931), believes that while the great burden of the control of syphilis must rest on the general practitioner who sees it first and who must learn to use the dark field until a satisfactory differential stain has been devised, it is the internist who must take up the load when the disease has become generalized. The author does not attempt to deprive the urologist or the dermatologist or any other specialist of the right to diagnose or treat syphilis in all its phases, provided his training is such as to qualify him for such work. But he does insist that syphilis is not a genito-urinary disease, is not a disease of the skin; it is a constitutional disease, a disease of the internal organs, and the internist is the one who is or should be best qualified to keep it within his domain. There are, of course, times when the urologist and the dermatologist must be called on for assistance, namely, in those rare instances when the genito-urinary organs are involved other than by the chancre, and in those increasingly less frequent instances of atypical late syphilodermas. But at times the internist must also call on the surgeon, the gynecologist, the aphthalmologist and the otolaryngologist.

Personal and News Items

We regret to announce the death of Dr. D. C. Partee, September 19, brother of Dr. N. G. Partee of Stephens.

Colonel Jay R. Shook succeeded Colonel William J. L. Lister as head of the Army and Navy General Hospital at Hot Springs National Park, Ark., who retired October 1.

In Kentucky, each month, from four broadcasting stations a ten-minute health talk is given. Various physicians of the State Medical Association are selected to give these talks.

In Tennessee, the State Auxiliary promotes a radio health talk every week, securing the talk from the American Medical Association in Chicago, and arranging with some physician to give the talk.

It is worth knowing that the American Medical Association will supply five minute radio talks on seventy-two different health topics, and fifteen minute radio talks on sixty-two different health topics.

Dr. A. G. Henderson has moved from Jonesboro to Imboden, his former home. Dr. Henderson is planning to visit his son, Commander Henderson, U. S. Navy, retired, Washington, D. C., in the near future.

"The profession of the South is again called to rally for the annual gathering of the medical men of the South. The Southern Medical Association meeting in New Orleans, November 18-20, the antidote for static minds, is a necessity, not a luxury.

The University of Arkansas Medical School opened September 16. Forty-six students had registered for the freshman class. Fifteen of this number were from Little Rock and twenty were from other sections of Arkansas.

Despite general business conditions, Dean Vinsonhaler said that the freshman class this year is about the average size. Practically all students from Arkansas are either graduates of the Little Rock Junior College or former University of Arkansas or Hendrix-Henderson students.

Dr. Vinsonhaler addressed the entire student body at appropriate exercises on the opening day. About 200 students had registered.

There were only two changes in the faculty, with the opening of the school this year. Dr. A. F. DeGroat succeeds Dr. Emmerick von Haam as associate professor of pathology and Dr. George Lewis was made head of the department of surgery.

The Tenth Councilor District Medical Society met in Fort Smith, September 15. The program was sponsored by the Fort Smith Clinical Society with the co-operation of St. Edward's, St. John's and Sparks Memorial Hospital. Will H. Mock, Prairie Grove, presided.

The program was as follows:

Operative Clinics: Eye Advancement Operation, Dr. E. C. Moulton; Tonsillectomy,

Dr. A. S. Chapman; General Surgical Clinic, Dr. M. E. Foster; General Surgical Clinic, Dr. A. F. Hoge.

Dry Clinics: Syphilis, Dr. D. W. Goldstein; Demonstration of tests for Labyrinth Disease, Dr. M. S. Johnson; Multiple Cancellous Osteomata, Toxic Goiter, Dr. A. E. Hertzler, Halstead, Kansas.

Noon Session: Round Table Luncheon. Hosts: Dr. E. C. Moulton, Dr. C. S. Means, Dr. C. S. Holt, Dr. S. P. Stubbs and Dr. Pierre Redman.

Topics: Ostitis Media as a Complication of Infectious Colitis, Dr. J. W. Amis; Problems in Infant Feeding, Dr. C. B. Billingsley; Peri-Renal Abscess, Dr. W. R. Brooksher, Jr.; Indications for Mastoidectomy, Dr. A. S. Chapman; Points in Gynecologic Technique, Dr. W. G. Eberle; Acute Head Injuries, Dr. Fred Krock; Indications for Surgical Interference in Glaucoma, Dr. H. Moulton; The Doctor in Court, Dr. W. F. Rose; Chronic Prostatitis, Dr. H. H. Smith.

Afternoon Session: Business meeting of the Tenth Councilor District Medical Society. Reports. Appointment of Committees. Election of Officers.

Scientific Program:

The Present Day Status of the Peptic Ulcer Question, Dr. S. J. Wolfermann, Fort Smith.

Present Day Status of Medical Practice, Dr. D. A. Rhinehart, Little Rock, President, Arkansas Medical Society.

Evening Session: Following a banquet and entertainment the scientific program was concluded, which was a paper Some High Lights on Certain Aspects of Genito-Urinary Pathology (Lantern Slides), by Dr. A. E. Hertzler, Chief Surgeon, Agnes H. Hertzler Memorial Clinic, Halstead, Kansas.

The Tri-County Medical Society met in Camden, Arkansas, Thursday evening, October 1st, with ninety-seven physicians present. Arkansas, Texas, Louisiana, Oklahoma, Tennessee and Illinois were represented by physicians at this meeting. The meeting opened with a banquet and musical entertainment. After the banquet the following program was rendered:

Address of Welcome—Mayor George R. Haynie, Camden.

Address—Dr. Edward H. Cary, President-Elect American Medical Association.

Address—Dr. D. A. Rhinehart, President, Arkansas Medical Society.

"The Etiology of Allergic Diseases" (Illustrated)—Dr. Ray M. Balyeat, Oklahoma City.

Short addresses were made by Dr. S. C. Barrow, President of the Louisiana State Medical Society; Dr. Frank Vinsonhaler, Dean of the Arkansas Medical School; Dr. L. V. Parmley of Little Rock; Dr. J. M. Bodenhamer, Editor of the Tri-State Medical Journal; Dr. J. S. Stell of Hot Springs; and Dr. E. C. Mitchell of Memphis. The next meeting of the Tri-County Medical Society will be held in El Dorado in January.

Dr. S. J. McGraw, *President.*
R. B. Robins, *Secretary.*

Obituary

THIBAULT, HENRY—Dr. H. Thibault aged 53, widely known physician in Pulaski County, died September 15, 1931, at his home near Scott after a long illness from tuberculosis.

Dr. Thibault was born on the family plantation southeast of Little Rock, being the eldest son of Maj. James K. and Corinne Gibson Thibault. He attended school in Little Rock and was graduated from the University of Arkansas Medical College in 1900. He began the practice of medicine the following year. He became known as a diagnostician and authority on malarial diseases. He became known best probably from his discovery of the use of quinine as an anesthetic in minor surgery, which has been supplanted, however, by other agents.

Dr. Thibault was president of the Lonoke County Medical Society several years and was president of the Arkansas Medical Society in 1928.

He is survived by his widow, five sons, Henry Thibault of El Dorado; Ensign James L. Thibault, U. S. N.; Felix, Frank and Jep Thibault; two daughters, the Misses Luey and Corinne Thibault; three brothers, Gibson and Carroll Thibault of Little Rock and David Thibault of New York, and three sisters, the Misses Corinne and Helen Thibault of Little Rock and Mrs. C. E. Smith of Tuckerman.

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Original Articles

CARDIOLYSIS: REPORT OF CASE*

R. B. ROBINS, M. S., M. D., and N. S. WORD, M. D., Camden.

Cardiolysis means loosening of the heart. The operation of cardiolysis was first conceived by Brauer of Heidelberg and performed for him first by Peterson in 1902.

OPERATION

The operation of cardiolysis is easily performed under intercostal block anesthesia without pain and with little or no shock. (1) "A downward curved incision is made extending from over the sternum at the level of the second rib to the sixth rib in the left anterior axillary line. The incision is carried to the ribs and the skin and muscle on each side of wound are dissected up, exposing the third, fourth, fifth and sixth ribs from the junction with the cartilages for a distance of about four inches. Three ribs are resected, preferably with part of their periosteum as otherwise they are likely to regenerate." The muscle and skin are brought back over the area and closed in the usual manner.

INDICATIONS FOR OPERATION

There are two indications which call for this type of operation, viz: (a) This operation is called for in all cases of chronic mediastino-pericarditis which do not respond well to medical treatment. In this condition there is usually a fairly normal cardiac musculature which is handicapped by pericardial adhesions.

(b) The operation is also indicated in cases of marked enlargement of the heart in which a rigid bony chest wall does not permit sufficient room for cardiac function.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

CASE REPORT

We wish to report a case in which a cardiolysis was done because of the marked enlargement of the heart and the pain associated with it.

Pat Smith, aged sixteen years, entered the Camden Hospital July 13, 1930. His chief complaint was severe attacks of pain over his heart and radiating to his neck and down his left arm to his finger-tips. This pain occurred in attacks and these attacks had gradually become more frequent. He was having from six to twelve attacks daily and was using from two to three grains of morphine daily for relief.

No definite history of the etiology or exact beginning of his condition could be obtained. He stated that he had noticed a bulging of the left side of his chest for about five years and that he had had pain over his heart at times for several years. The attacks of pain had become more frequent and more severe as time had passed. He gave a history of having mumps, measles and whooping-cough in childhood. He also gave a history of having typhoid fever in 1926 and stated that his heart condition had been worse since then.

The essential findings on physical examination showed an anemic, emaciated male sixteen years of age. There was bulging of the precordium and a marked pulsation over the left side of the chest and in the neck. The area of cardiac dullness extended from one inch to the right of the sternum to the left anterior axillary line. There was a marked diastolic murmur heard best in the third left intercostal space. There was a marked Corrigan water-hammer pulse. Blood-pressure was 260 systolic and 0 diastolic. There was nothing of importance in the laboratory examinations. Kahn test was negative. X-ray plate showed a markedly enlarged heart. No aneurysm was present.

Diagnosis: Chronic valvular heart disease with marked cardiac hypertrophy (cor bovinum).

Cardiolysis was done July 14, 1930, under intercostal block anesthesia. The patient made an uneventful recovery, has been free of his anginoid pain and was gradually reduced on morphine and did not take any morphine after the seventh post-operative day.

Dr. Elsworth Smith (2) of St. Louis has reviewed all cases of cardiolysis that have been reported in the literature and, of the one hundred and seven cases reported, one-third were made able through this operation to return to self-supporting occupations and two-thirds were restored to lives of comfort within lines of limited activity.

We report this case to illustrate and bring to your attention the value of cardiolysis in this type of case.

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DISCUSSION

DR. S. C. FULMER, Little Rock: When we see an unusual case of this kind, it seems to be a trite expression with doctors to say that it is a very interesting case. But in reality we have just listened to and had presented to us a very interesting case. As I see it, there are two interesting features to this presentation. In the first place, the therapeutics is an interesting thing. I believe we all agree that the object of all therapeutics is to relieve the symptoms and restore function. We would certainly like to relieve symptoms if the symptoms are pain and others equally as bad. I think Dr. Robins is to be commended in this particular case for at least the relief of one bad symptom, that of pain.

The other interesting feature in this case is the obscure etiology. Here is a young boy with advanced heart disease which apparently has been known for five years. Now this type of heart disease, called aortic regurgitation, or Corrigan's disease or aortic insufficiency, as we all know, is usually due to syphilis. Syphilis in this case has been found not to be present, neither in the congenital nor the acquired form. Aortic heart disease sometimes is present as a part of a rheumatic picture but the history is negative for acute rheumatic fever. He does give a history of having had typhoid about five years ago, and it seems that the history of this trouble dates to about that period, so we may be dealing with an unusual case of endocarditis which fixes itself largely on the aortic valve, resulting in incompetency of that valve with this picture. The prognosis in a case like this, of course, is bad. In my opinion, the prognosis in aortic regurgitation is better if the case is not luetic, but most cases are luetic in origin. I have one patient now of a typical case of aortic regurgitation. This was diagnosed in her in 1907 and from her appearance she still has several years ahead of her. Ordinarily, when a diagnosis of aortic regurgitation is made, we give the prognosis of a very short span of life and I am wondering in this particular case if the prognosis will run higher, as all the non-luetic aortic insufficiencies do.

DR. G. A. WARREN, Black Rock: What about the blood pressure?

DR. ROBINS, in closing: I asked Dr. Kittrell to examine this boy this morning and state this afternoon what his condition is today. Dr. Kittrell tells me that this morning his blood pressure was 300 systolic and zero diastolic. There may have been some elevation due to excitement. It might have been indiscreet on my part to have asked him to appear here before this audience with a blood pressure of that kind, but I felt it would add more interest to my presentation by having him present. His heart condition, outside of pain, is apparently the same. He doesn't have any decompensation now. He is completely free of pain and able to go about his normal activities. I think if for no other reason than that of relieving pain, if only for a month or six weeks, the operation was well worth while.

DR. SAM THOMPSON, Stephens: I was fortunate enough to see this young man before the operation was performed. Dr. Robins didn't describe the clinical picture of this boy. He was bed-ridden, unable to get around, suffering intense pain, unable to breathe; he was cyanotic and the bulging, I wouldn't attempt to give you the measurements but it was extremely marked. Fortunately I was in the hospital when it was done. And the thing I want to call your attention to is that about two weeks ago I saw this young man at a tract meet. He was not a participant of course but he mingled with the boys and girls at that track meet and was having a fine time, and without any effort or inconvenience at all. I believe if a diagnosis can be made in these cases that the surgeon can relieve them more than we think.

"VISCERAL SYPHILIS"*

A. A. Blair, M. D., F. A. C. P.
Fort Smith.

I want to discuss briefly a disease that not only concerns the internist, but its association with other diseases makes it of equal concern to the general practitioner or specialist in any branch of medicine and surgery. I know from time to time you can recall some case, whose reputation, social standing or church affiliations made you a little reluctant in going into the investigation of the luetic factor in the diagnosis, and will share with me the chagrin in such an unwarranted attitude. My brief career in the practice of medicine has

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

taught me many valuable lessons with reference to differential diagnosis of chronic diseases, and I wish to conform most ardently to the old system of "First rule out syphilis and then make a diagnosis."

Rollenston's monograph on syphilis is most interesting. In the pre-Wassermann days the pioneers were more cautious in many respects than we are with all our serologic and other methods of diagnosis. Frankly we are too prone to accept negative serological tests as final. There's the negative Wassermann test on the individual who emphatically denies infection to be reckoned with and the so-called unusual case that has not had a therapeutic test. Three years ago I treated a young girl who had a rather severe pneumonia of left lower lobe. After ten days of high temperature it dropped to about normal, with 99 degrees elevation in afternoon, which continued some 60 days. Percussion note remained dull in this area; chest puncture on several occasions failed to find fluid. X-ray diagnosis was "Unresolved pneumonia." Blood Wassermann test was 1 plus; cleared rapidly under inunctions of mercury and iodides.

The tendency of syphilis to produce vague clinical pictures, at times difficult of recognition, goes without saying and its association with any other disease must be borne in mind. In diseases that do not respond rapidly to treatment of known therapeutic value, and all perplexing states of ill health, mercury and iodides may prove you a "wonderful doctor" in the mind of that patient.

Pulmonary syphilis may occur in the form of diffuse pulmonary gumma or as a general bronchitis, or in association with many other acute respiratory infections. The doleful influence of syphilitic infection upon the course of pulmonary tuberculosis is well known. I recently saw a professional woman who was sent to the State Tuberculosis Sanitarium for incipient tuberculosis, and was so treated until some external manifestation arose to suggest Wassermann, which was 4 plus, and this patient blossomed out like a rose after luetic treatment.

In every patient on whom I have made a diagnosis of aortitis, I regarded it syphilitic until otherwise proven, and autopsy probably is the only way this can be done. This is probably the earliest lesion of latent syphilis. The frequency with which syphilis attacks the root of the aorta is due to the rich supply of vasa vasorium in this region. The frequent occurrence of arterio-sclerosis with syphilitic disease makes it difficult to separate these two factors as causes of coronary disease and the two important causes of cardiac hypertrophy are aortic regurgitation and hypertension. Warthan states that the hearts of practically every male syphilitic show latent lesions. In 386 autopsies over 25 years of age, the aorta was found to be involved in 97.5 per cent of cases, and interesting enough to note, not one time was the mitral valve found to show lesions of syphilis.

In the pancreas a well defined syphilitic infection may be encountered in the form of interstitial or gummatous type of lesion. The differentiation of syphilis from other types of pancreatitis is impossible and the symptoms may be associated with and easily masked with a hepato-splenic complex. A case believed to be one of syphilitic pancreatitis was examined in our clinic three years ago. A man 40 years of age, rather plethoric individual, complaining of indefinite abdominal pain over six weeks period, weakness, general malaise, polyuria and thirst. Diabetes at once suggested itself. Gave history of sore on penis some five years previous, but no treatment. Blood sugar reading was .270 mgm. per 100 cc. blood. The blood Wassermann and Kahn Precipitation tests were strongly positive. Diabetic management was instituted and cautious luetic treatment begun. Within a few weeks time this patient was well on to recovery. The carbohydrate tolerance rapidly returned to normal and has not had any return of glycosuria on unrestricted diet to date.

The liver is frequently the seat of lesions of latent syphilis in the form of gummas or perivascular lesions leading to chronic hepatitis. Warthan thinks that hepatic lesions in latent syphilitics are decidedly on the increase, of the suspicion that modern treatment with arsenicals may bear some relationship to this increase. There may be an atrophic change in liver, or the liver may be considerably increased in size, frequently associated with an enlargement of spleen, resembling a Banti's disease. On account of high temperature and chills may resemble malaria or confused with empyema of gall bladder. The last case in this series I want to call to

your attention is a woman age 33, who came into my office on December 11, 1930, complaining of chills and fever for more than a year, pain in right hypocondrium, loss in weight, etc. Had been treated by several physicians; had been given thorough quininization (30 grains daily for three weeks) without influencing chills or fever, and was tenatively scheduled by a local surgeon for cholecystectomy. In eliciting her history it was found her husband who was divorced had been treated for syphilis. General physical examination showed her rather pale, nervous and weak, weight 110; blood pressure 118-66; pulse 104, temperature 104; pupils react to L & A; no jaundice noted on sclera; no dental infection present; throat essentially negative; nose and sinuses clear; cervical glands not enlarged; chest negative; heart showed a slight murmur over base not transmitted. In the prone position there appeared a slight fullness in epigastrium; liver margins felt and liver decidedly enlarged, tense and painful on palpation. There was also a slight enlargement of spleen. Vaginal examination showed moderate leukorrhea, old cervical erosion; no masses or tenderness. Examination of extremities showed bones and joints normal; knee reflexes normal; negative Rhomberg. Laboratory examination showed white count 9,600. Differential, polys. 76; S. L. 18; L. L. 4; eos. 2; total red count 3,200,000; Hemoglobin 61 per cent; catheterized urine negative; malaria negative; agglutination test for undulent fever negative; typhoid and paras A and B negative; blood Wassermann (Kolmer) was 44421 positive; Kahn Precipitation test positive. A diagnosis of hepatic syphilis, febrile type, was made and this patient was cautiously put on anti-syphiletic treatment consisting of intramuscular injection of soluble bismuth and iodides by mouth and promptly responded to treatment, temperature falling to normal in 48 hours, with relief of pain in liver region, general feeling of well being, steady increase in weight (25 lbs.) and disappearance of tenderness and with gradual decrease in size of liver and a complete recovery of patient.

DISCUSSION

DR. D. A. RHINEHART, Little Rock: I have learned much about visceral syphilis by making mistakes. One of the first instances was that of a young man, 26 years of age, who was thought to have a carcinoma of the liver because a surgeon had found nodules in the liver. Another was a young girl with a disease of the knee. She was operated upon twice and given X-ray treatments on a diagnosis of sarcoma, yet the pathologist could not find sarcomatous cells in the specimens removed at operation. When she developed an interstitial keratitis, the opthalmologist diagnosed the condition properly. As a result of these and others, I have adopted the policy of suspecting syphilis whenever there is any discrepancy in the clinical picture presented by the patient.

Note the discrepancies in the cases reported by Dr. Blair. The first was thought to be a lobar pneumonia lasting for ninety days without pus in the pleural cavity. Another was thought to be malaria that did not respond to adequate quinine dosage. Last summer within two weeks I saw two patients with syphilis of the liver that were correctly diagnosed by suspecting syphilis because there was a discrepancy in the clinical picture. The first was a middle-aged man in good health who had a large liver. Complete X-ray and other examinations did not disclose a cause for it. The second was an older man who had had a painless jaundice and an enlarged liver, the jaundice lasting for nearly five months. The jaundice was of the lemon-yellow color seen in acute catarrhal jaundice, but without the prostration and other symptoms accompanying that condition. Jaundice of such long duration due to obstruction is usually much darker in color. A complete examination of this patient was negative, except for the enlargement of the liver. Both these patients had four plus Wassermann tests.

As a result of these experiences, I believe it a wise policy, until such time as we can have a Wassermann test run on the bloods of all our chronically ill patients, to look for discrepancies in the clinical pictures presented by the patients and examine the blood for syphilis when they are found.

DR. ROY NORTON, Fort Smith: We all appreciated Dr. Blair's timely paper. I would like to go a step further than Dr. Blair and Dr. Rhinehart and say, "Don't wait until there is a descrepancy in the clinical picture but suspect syphilis in every case and determine whether it is present or not." There are three clinical entities that may simulate practically any disease known to medical science; these are syphilis, tuberculosis, and functional nervous diseases. These three should be thought of in every case, and if we make it a habit to determine their presence or absence we will avoid a great many pitfalls. I feel that Dr. Blair's suggestions and Dr. Rhinehart's emphasis on them should make us run a great many more Wassermanns than we have previously, and thus permit us to avoid a great deal of embarrassment from missed diagnoses.

DR. BLAIR, in closing: One or two points in conclusion: Every patient should have a Wassermann test when undergoing a physical examination. Even after a negative test, you should not think the patient may not have syphilis.

Our records show that approximately 12 per cent of all patients who were given Wassermann test over a three-year period showed positive Wassermann. However, that includes all suspected cases of syphilis. If the Wassermann test remains negative and the patient has clinical manifestations pointing to syphilis, he should have a rigid therapeutic test.

DIAGNOSIS OF INFLAMMATIONS OF THE MALE URETHRA*

PAUL Z. BROWNE, M. D., Hot Springs.

Diagnosis of inflammations of the male urethra present a frequent and difficult problem. Determining the exact nature of the urethral infection is not always an easy task and the time that should be consumed, if it is to be attempted conscientiously, is not always found available to the average busy practitioner. Urethral infections vary considerably as to their etiology and clinical manifestations and when a patient presents himself with a urethral discharge or other symptoms indicating an inflammation of the urethral canal, a diligent inquiry should be made and all our diagnostic skill brought to bear to determine the nature of the infection in order that appropriate treatment may be institued.

In discussing the underlying principles that should influence the diagnosis it has been customary to distinguish between specific or gonorrheal and non-specific inflammations. The nonspecific are further divided into those due to bacteria other than the gonococcus, non-bacterial, chemical irritants, mechanical or traumatic and ingestive.

The diagnosis of the usual case of gonorrheal urethritis is a fairly simple matter. I heartily endorse the idea, however, that the diagnosis should be based on the clinical history and findings plus the microscopic examination with emphasis on the latter. When the patient is a single man with a typical history and clinical picture, I am usually satisfied to make a diagnosis on a simple methylene blue stain. If, however, the patient or source of infection is a married person one should be more careful, make repeated Gram stains and cultures, attach more importance to the clinical picture and if possible check up on the women in the case. Don't forget that the micrococcus catarrhalis is also Gram-negative and can be differentiated from the gonococcus only by culture. The differentation is important from a medico-legal point of view as well as that of marital happiness.

The division of the male urethra into anterior and posterior portions markedly influences the symptomatology of this tract. There is a marked difference between the placid progress of an anterior urethritis and the urgent and stormy invasion of the posterior urethra. Pain, frequency and urgency usually mark the transition and the two glass test confirms the suspicion. The two glasses are found to be turbid where before the turbidity was confined to the first glass only. Posterior involvement may occur, however, with no subjective symptoms referable to that part and with the urine clear and sparkling and if the physician is not alert he may fail to discover it.

Frequently an acute exacerbation or recurrent chronic urethritis will present the discharge and cloudy urine. An important diagnostic point in this connection is that a microscopic study of the urethral discharge will show that leucocytes predominate in the acute infection with few or no epithelial cells; while in chronic infections epithelial cells predominate and the leucocytes are diminished in quantity.

When we approach the subject of chronic urethral infections we find that the problem is much more complicated and the correct solution is arrived at only through most careful clinical observation and study. The most frequent symptom is a urethral discharge, usually a morning drop. There may be an elusive discharge at odd times during the day which is most provoking and is usually one of the favorite possessions of the neurasthenic. There may be pain in the back, lower abdomen, groins, perineum and thighs. These pains may be expressive of involvement of the seminal vesicles and prostate and at times are confused with renal lithiasis, appendicitis or hemorrhoids. The right seminal vesicle is more often affected than the left. It is remarkable at times how backaches are relieved by prostatic massage. Many, perhaps most, of these cases as they present themselves are post-gonorrheal rather than gonorrheal.

In a given case of chronic urethritis the first thing to be decided is: Where does it originate? Definite location of the lesion is necessary to exact diagnosis and is only possible by a detailed history, careful routine of physical, chemical and microscopic examination plus urethroscopy. Experience has shown that the most frequent causes are strictures or infiltrated areas, infection of the urethral glands or follicles, prostatitis, vesiculitis and all their respective variations.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

Upon palpation of the urethra over a sound you can sometimes feel nodules or infiltrated areas the size of small shot or peas, the result of infected urethral follicles. With the urethroscope you can see the inflamed mouths of these urethral follicles with a mucous or purulent secretion escaping from them. At times they are transformed into real little purulent cysts which are seen as white or yellow glistening prominences.

Quite a number of chronic urethral discharges are due to strictures or infiltrations. These may be congenital or acquired, hard or soft, small or large caliber. Strictures are diagnosed with a bougie a boule and the urethroscope to ascertain character and extent. Another diagnostic sign of true stricture is grasping of a metal sound which can only be withdrawn with force. Just behind strictures, at times, will be found masses of granulation tissue that are infected and bleed easily. Clinically it is frequently observed that actual strictures of the urethra do not develop until years after the gonorrhea. Gradual increase of scar tissue along the urethra previously injured by the original gonococcus infection is probably due to excretion in small quantities of toxic products from chronic infections of the prostate and seminal vesicles. Strictures associated with nongonococcal infections are usually of the large caliber type.

Prostatitis is found in practically every case of chronic urethritis and gonorrhea is the predisposing cause in the majority of instances. The impression still prevails among many physicians, however, that prostatitis is essentially a post-gonorrheal condition and does not exist if there has been no antecedent gonorrhea. This is certainly an erroneous impression. The prostate is frequently the recipient of infection from other foci outside the genito-urinary tract. A great many have had one or more attacks of tonsillitis or some definite dental infection to which the prostatic infection is secondary. The colon is a frequent offender. Numerous authors have reported large series of cases where the infection was traced directly to the colon by bacteriologic identity of the same organisms in culture and further corroborated by positive agglutination with the patient's serum and bacteria isolated from specimens taken from the same patient. The clinical evidence of improvement in the infection of the prostate following the correction or removal of such foci is considered proof of this relationship.

A small number of cases with no gonorrheal history have had one of the infectious diseases such as pneumonia, typhoid or influenza that act by lowering the vitality of the mucous membrane. At times, the mild type of nongonorrheal urethritis may go by direct extension into the prostate without producing any definite symptoms of posterior urethritis. In many cases, however, the activity of the prostatic infection is brought to attention by certain symptoms and signs of an obstructive nature resulting in urinary disturbances or urethral discharge.

Where prostatitis exists the urine may be entirely clear and no subjective symptoms present. The prostate may be perfectly normal to rectal palpation and an enormous amount of infection exist. Simple palpation is not enough. The important thing to remember is that clear urine does not necessarily mean a normal genital tract. Prostatic inflammation must be eliminated and this can only be done by massage and a microscopical study of the expressed secretion. Sometimes pus does not make its appearance until the second to fifth massage and often there will be normal secretion and pus on alternate days.

The leucocytes of chronic prostatitis are very much smaller than acute gonorrhea and the protoplasm is usually granular. The frequency and longevity of the gonococcus in the secretion of chronic prostatitis is a debatable question, authors differing widely in opinion. The bacteria most often found, in addition to the gonococcus, are the staphylococcus, colon bacillus, pneumococcus and streptococcus.

In a general way what has been said about the prostate applies equally as well to the seminal vesicles, on account of their close relationship both anatomically and pathologically.

In some cases of urethritis with no definite history of a previous infection, a careful inquiry into the sexual life will reveal evidence of genital trauma such as excessive sexual indulgence, prolonged ungratified sexual excitement, masturbation or "withdrawal."

Don't forget that urethral inflammations are often due to chemical irritants which have been employed as injections for prophylactic purposes. Also that overtreatment with strong irritant chemicals or other rough measures are productive of great damage to the urethra. At times a pyogenic or purulent urethritis follows the introduction of unclean

catheters or sounds into the urethra. A urethral discharge in the presence of genital tuberculosis may at times present temporary difficulties in differentiation. Alcohol, cantharides, arsenic, potassium iodide, and turpentine will often cause a mild urethral inflammation.

A chronic discharge, specific or nonspecific, is sometimes a mere smoke screen for pyelonephritis, a silent renal calculus or pyonephrosis. The upper urinary tract, with the addition of focal infection, is frequently the source of a nongonorrheal urethritis and often produce no other symptoms of which the patient is aware except a urethral discharge. Cases have cleared up after a few lavages of the kidney pelvis which have been massaged and dilated for months.

Syphilitic chancres at or within the meatus are seen quite often. When occurring in the fossa navicularis, they are at times most deceiving and frequently unrecognized. The discharge may be thin and watery, blood tinged or profuse and purulent with cloudy urine. Gonococci are absent. The lips of the meatus are usually deformed, red and gaping, at times whitish and shiny. Upon palpation the typical sharply circumscribed indurated area can be felt. Another important point is examination of the secretion for spirocheta pallida.

The modern cystourethroscopes have made visual diagnosis of urethral pathology a simple and exact procedure. By its use the urethra has become as accessible to examination and treatment as the vaginal canal; as exact as an opthalmoscopic examination. One must have a working knowledge of this tract, however, and know the normal from the abnormal if he wishes to avoid foolish errors in diagnosis.

Soft infiltration is one of the most frequent lesions encountered in posterior urethritis. The mucosa is congested, hyperemic and bleeds easily. The verumontanum is increased in size, dark red in color and at times granular in appearance. Frequently the orifices of the utricle, ejaculatory ducts and prostatic follicles are open-mouthed, inflamed and you can see mucous or purulent secretion escaping from them. Often the prostatic follicles appear as little purulent cysts, simulating boils. Hard infiltration presents a different picture with its cardboard-like appearance, grayish red, yellow color and lack of elasticity. Prostatic caverns are occasionally seen, the result of abscesses. Frequently in old post-gonorrheal urethras wart-like growths of granulation tissues are found. They are very friable, bleed easily and probably are the results of old gonorrheal ulcers.

Hypertrophied projections such as papilloma and polyp are observed quite often and at times a chronic inflammation of the mucosa can be seen about them. They may give rise to exceedingly distressing symptoms, especially when located near the internal sphincter.

Cysts are seen in specific as well as nonspecific cases and are more prevalent at the bladder neck and posterior to the vera. Most of them are small and resemble glistening dew drops. They may attain larger sizes, however, and produce symptoms of partial occlusion and irritation like that of a foreign body.

Stones and small foreign bodies are occasionally found in the posterior urethra. Stones may have their origin in the upper urinary tract and lodge in the prostatic urethra or form primarily in diverticulae or suppurating pockets. A sound will give crepitus if they are in communication with the urethra. At times they can be seen with the urethrascope. If in doubt, use the X-ray. Recently I saw a case of this type in my office. This patient gave a history of frequent and painful voiding with terminal hematuria, intermittent in character, of several months duration. He had been dilated, massaged and irrigated at intervals for what was supposed to be a stricture and prostatitis. Cystourethroscopic examination revealed a small stone located in a pouch in the posterior urethra. Removal of this stone through the urethroscope with urethral forceps entirely relieved his symptoms. The nucleus of this stone consisted of the tip of a whalebone filiform.

In closing, let me impress upon you the importance of a more thorough and painstaking examination in arriving at a correct diagnosis of inflammations of the urethral canal. In practically every community of size there are many "urethral sufferers" and neurotics who wander from place to place with their bitter statements and experiences as the victims of erroneous diagnosis. The condition of many of these patients, aside from the underlying pathology, is due to sins of either

omission or commission. Some of them are still bearing the diagnosis of gonorrhea who probably never had gonorrhea and in many cases the cause of the disturbance can be traced to the teeth, tonsils, colon or other foci outside the urethral tract. These cases may be serious not only from the pathological point of view but also from being a disturber of domestic relations. Definite location of the lesion is necessary to exact diagnosis and is only possible by a detailed history, careful routine of physical, chemical and microscopic examination plus urethroscopy. The modern cystourethroscope is a great help in locating urethral pathology. Whatever the cause might be, it will be a source of great comfort and gratification to both patient and physician when that cause is discovered and favorable response follows the institution of appropriate treatment.

DISCUSSION

DR. W. P. SCARLETT, Russellville: In my small inland town I have been doing a little urology. I remember two or three patients I treated and upon passing the sound they bled very readily and easily and I couldn't stop the hemorrhage with any treatment I gave them with the uroscope touching it with silver nitrate or by passing the sound numerous times. We don't have the use of laboratories at Russellville and have to send all our blood to Little Rock for testing. For this reason we do not make Wassermann tests as often as we should, or as often as Dr. Rhinehart and others say we should. I sent the blood of every one of the cases that bled easily to the laboratory, and I found all to have syphilis. That was the point that a friend much older than I brought to my attention. He said that in most of these cases that bleed easily on the passage of the sound he always suspected syphilis.

Another thing I find in the treatment of gonorrhea in these old chronic cases that the other doctors haven't been able to cure with prescriptions and office treatment is that a great many of those that hang on and become chronic also have syphilis.

An old man from Clarksville, 76 years of age, came to me for treatment. He didn't come to me first but to an eye, ear, nose and throat specialist for corneal ulcers and the doctor suspected gonorrhea. It proved to be gonorrhea, then he came over to me for treatment of his gonorrhea. At first, we didn't suspect it in a man that age, but I treated him for several weeks and finally it occurred to me to make a Wassermann, and this old gentleman also had syphilis. So, after giving him anti-luetic treatment along with his treatment for gonorrhea, I cleared both up very nicely.

DR. BROWNE, in closing: One point in regard to polyps. They may occur in the urethra and give rise to no symptoms. Recently, since writing this paper, I saw a physician who discovered a few polypi in the meatus, accidentally, and upon doing a meatotomy found the fossa navicularis lined with these growths. Urethroscopy revealed numerous polypi in the anterior urethra. Usually they are benign. The important thing is that they might become malignant and some do.

COUNTRY DOCTOR

By Edith Tatum

He calls no hour of day or night his own.
Through heat or cold he goes his rounds alone;
Here, to bring some mortal into being,
There, to ease some soul that must be fleeing.
He listens earnestly to tales of grief,
Forgets himself that he may give relief
To bodies suffering, or tortured minds;
In service to all men his pleasure finds.
May God forever bless him with His grace,
For when he goes, oh, who will take his place?

—*Parents Magazine.*

Among the domestic disasters in which the Red Cross gave aid to victims during the fiscal year ended June 30, 1931, were floods in Nogales, Arizona, McCulloch County, Texas, and San Doral, New Mexico; tornadoes in Lyon County, Minnesota, Latexo, Texas, Oklahoma County, Oklahoma, Lincoln and Franklin Counties, Mississippi, Yell County, Arkansas, Warren County, North Carolina, and Greenwood County, Kansas; cloudbursts in Utah, and Brisco and Hall Counties, Texas; mine explosions in McAlester, Oklahoma, Sunday Creek, Athens, Ohio, Lutie, Oklahoma, and Linton, Indiana; fires in Panama City, Florida, and Portage, Maine; forest fires in Florence County, Wisconsin, Michigan, Middleton, California and London County, Tennessee; a railroad accident in Elizabeth, N. J., and a typhoid fever epidemic in Jackson, Ohio. In the insular and foreign territory aid was given in floods in Turkey; a hurricane in Santa Domingo; earthquakes in Mexico, Albania, New Zealand and Nicaragua; a storm in American Samoa; and three fires in Porta Rico. The public support of the Red Cross by membership enables the organization to come to the rescue of afflicted communities at all times.

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Editorials

POWDERED YEAST CURBS PELLAGRA

Powdered yeast as a measure to control pellagra repeatedly demonstrated its value in relief programs of the American Red Cross during recent years. The preventive was introduced to the medical world during the Mississippi Valley flood in 1927 when simple educational measures proved inadequate in checking the spread of the disease. More than 12,000 pounds of yeast were distributed by the Red Cross during that emergency.

Even greater need for pellagra control measures was seen in the 1930-31 drought. Again powdered yeast was relied upon to help curb its spread. Before the Red Cross had completed its drought relief program, 81,000 pounds were distributed in the stricken communities. As nearly as possible, balanced diets accompanied the distribution of yeast. The relief agency made an effort to include fruits, vegetables and other healthful foods in the suggested diets for residents of the affected area. The society's school lunch program, benefiting 185,000 pupils in 3,500 schools also was a factor in combating the spread of pellagra.

In all these projects—the Mississippi Valley flood program, the school lunch project and the general drought relief task—Arkansas benefited. The medical profession of that state worked closely with the Red Cross in the yeast distribution program. None was given out without the approval of local health authorities or doctors. They also contributed

other services which helped bring about successful completion of the drought relief work. Many Arkansas medical men, for example, were and are now among the leaders of local Red Cross chapters.

The annual Roll Call of the Red Cross will be held this year between November 11-26, Armistice Day to Thanksgiving. During that period the public is invited to enroll.

THE FIGHT AGAINST DIPHTHERIA

In discussing the prevention of diphtheria the United States Public Health Service has recently pointed out that after the diagnosis is made every case should be reported immediately to the health officer. The health officer will see that the patient is properly isolated and that the necessary precautions are taken at the bedside. The patient should remain in isolation until two negative nose and throat cultures, taken at 24-hour intervals, shall have been obtained. Such restrictive measures sometimes seem rather harsh to some parents, but to be content with less than this means the possibility of other cases developing.

Most of the cases of diphtheria occur in the age group under five years. It is practically impossible to teach this group the principles of personal hygiene; consequently, immunizing measures are essential in this group. Science has produced two successful active immunizing agents against diphtheria; namely, toxoid, and toxin-antitoxin mixture. As far as is known, the immunity produced by these agents continues during the life of the individual. All parents are urged to see to it that the preschool child from six months to five years is immunized by means of two doses of toxoid. Recent experiments have revealed that toxoid will produce immunity in a higher percentage of cases than does toxin-antitoxin. Toxoid will produce immunity in from 90 to 95 per cent of the cases, as revealed by a Schick test made six months after the last dose. For school children it is recommended that all under the age of seven years be given two doses of toxoid with an interval of one month between doses. Older children should be Schick-tested before immunization and the susceptibles only immunized with toxoid. From four to six months after the last dose, all may be Schick-tested again, when more than 90 per cent will be found to be immune. As diphtheria usually occurs during the autumn months, this immunization should be done in the spring, in order to allow time for the development of immunity.

Since available statistics reveal the fact that the majority of deaths from diphtheria occur in the preschool age, it is imperative that the young children receive this preventive treatment. In this particular phase of the work, the family physician can render a very valuable service. Every parent is urged to let the baby's first birthday present be a complete protection against diphtheria. It should be remembered that, as a general rule, the younger the child the less the reaction from the immunizing agent, and also the more likely is the child to die if he should develop diphtheria.

Abstract

VENOUS PRESSURE

In the experience of J. A. E. Eyster, Madison Wis. (Journal A. M. A., October 31, 1931), the venous overload associated with extreme physical activity in man or the experimental animal does not lead to dilatation and hypertrophy of the heart so long as the heart is normal. Whether or not a high venous pressure leads to cardiac muscle injury with dilatation and subsequent hypertrophy seems to depend on two factors: the extent of the venous overload and the protective influence of the pericardium. With the pericardium intact, the restraining influence is sufficient to prevent injury except when the normal load is greatly exceeded as a result of valve injury, orifice constriction or massive increase of blood volume. On the other hand, with the restraining influence of the pericardium absent, damage may result from the high venous pressure associated with severe muscular exertion. With the process of dilatation and hypertrophy once initiated, subsequent exposure to high venous pressure appears to lead to greater changes than would otherwise appear. The importance of the protection of the heart, already the seat of myocardial injury and hypertrophy, from high venous pressure would thus appear obvious, not alone from the general rule that a diseased organ is injured by overwork, but from experimental observation that suggest a rational explanation as to the mechanism by which this further damage occurs.

President's Page

When asked about his practice, a physician from one of the smaller towns of the State said that the last he had was fine. Others, when asked the same question, have most often replied that the business of practicing medicine has gone on about as usual, but that the financial remuneration is considerably below average.

In traveling over the State I find few signs of bad effects of the flood, the drought, or the industrial depression. In an agricultural district there is little unemployment during a crop-growing period. Arkansas certainly has been blessed with one of the best feed and food growing seasons ever experienced. There is an abundance of produce of all kinds.

However, the low prevailing prices for agricultural products and the loss of assets and credits from bank failures have left very little money in circulation in the State. When products are plentiful and money is scarce, business through the usual channels is curtailed, while trade, barter, and payment in kind partially take its place. This will be the prevailing condition in this State until commodity prices are higher.

Many physicians appreciate the prevailing economic conditions and are accepting in payment for their services such products as they can use or sell to advantage. I know of two physicians who have rented a pasture, and of another who accepts frying-sized chickens in payments for calls; I saw over a thousand quarts of canned foodstuffs in the basement of a hospital that had been taken in during the summer in payment of hospital bills.

In the immediate future in Arkansas, people will have plenty to eat, but there will be little money to pay for pleasures, luxuries, and unusual expenses such as medical care. The economic status of physicians is, on the average, the same as that of the communities in which they live and practice. During the coming year, in most parts of the State, physicians may expect as many calls as usual for their services, but they must not expect so great a monetary return. Such money as they receive must be expected from those financially in better circumstances than the average and from those whose income is from various sources.

D. A. RHINEHART,
President Arkansas Medical Society.

Abstracts

INFANTILE ECZEMA: STUDY BASED ON ONE HUNDRED AND SIXTY CASES

Francis Scott Smyth, San Francisco, Katherine M. Bain, St. Louis, and Minnola Stallings, San Francisco (Journal A. M. A., October 31, 1931), consider eczema as the response of the skin to irritation. The source of that irritation may be single or multiple, related to local infection, to cold or heat, or to intolerance of an allergic nature. The allergen frequency is not entirely explained by contact but probably on some immunochemical mechanism. While skin tests are often of great value, they rarely develop before the fourth month and may be lacking entirely. In other words, the capacity to form skin tests and the clinical reactivity are independent variables but frequently related. The skin of infants is particularly susceptible to trauma and to sudden changes of temperature. Such injury may itself establish a vicious circle. With increasing age this may entirely disappear. In other instances allergy must be considered as an additional factor. One hundred and sixty patients are surveyed by the authors with regard to the various factors. On the basis of their observations they believe that in the treatment of eczema the diet must not be so restricted as to prevent normal nutritions, since sweeping restrictions may be dangerous.

HYPERTENSION: VALUE OF CALCIUM SALTS PLUS DIET IN ITS MANAGEMENT

N. S. Davis, III, Chicago (Journal A. M. A., October 31, 1931), has found that calcium lactate, 8 Gm. in water half an hour before meals, plus a low salt, low maintenance protein diet, with most of the protein from milk, moderate in total amount but adequate in all respects, causes considerable subjective improvement in patients with hypertension but objectively it is of little value. It seems that hypertension, like fever, may be intermittent, remittent, continuous or pernicious. It seems that, like fever, hypertension may be a symptom of several diseases or pathologic conditions for which there may be various causes. It seems that just as physicians formerly sought antipyretics to lower fever without considering the disease of which it was a symptom, they are now seeking depressor substances to lower the blood pressure instead of concentrating on the description of the diseases of which hypertension is a symptom and their differentiation. The author emphasizes two points: 1. No cure for hypertension will be found until physicians are able to recognize the conditions of which it is a symptom. (2) The value of any therapeutic agent in the treatment of hypertension cannot be determined in a few days or weeks but only after months or years of trial.

ASCARIS LUMBRICOIDES: LOSS OF INFESTATION WITHOUT TREATMENT

The results obtained in a study made by A. E. Keller, Nashville, Tenn. (Journal A. M. A., October 31, 1931), show that under environmental conditions which are not suitable for the transmission of intestinal parasites the worm burden of infested individuals is markedly reduced without the use of anthelmintics. In his group of patients who did not receive treatment over a period of fifteen months a reduction in incidence of 100 per cent occurred in the cases of Ascaris, 83.4 per cent in the cases of Hemenolepis nana, 75.6 per cent in the cases of Trichuris and 59 per cent in the cases of hookworm infestation. The study shows that proper methods of disposal of human feces are more effective in the control of the common human intestinal parasites than the use of anthelmintics alone.

Personal and News Items

Dr. Paul M. Fulmer announces the reopening of offices at 917 Donaghey Building, Little Rock, with practice limited to diseases of the colon.

The American Red Cross distributed 610,000 assortments of garden seed to farmers in the stricken drought areas for the spring and summer gardens of 1931. Each assortment contained from 14 to 18 different varieties of seed and had a retail value of from $3.50 to $4. The total cost to the Red Cross was more than the sum spent out of the national organization's treasury in the previous year for disaster relief. Such services to victims of disasters is made possible by the support of the

public. One of the avenues of public support is the annual Red Cross Roll Call which will be held this year from November 11 to November 26.

In a single year 100,000 deaths and several million injuries occur in the United States from accidental causes. The Red Cross is seeking to reduce this number by a campaign of instruction in first aid. Red Cross membership gives each person a share in the support of this service as well as all other activities of the Red Cross.

Members of the Jefferson County Medical Society were entertained by Dr. J. W. John with a barbecue supper November 3, 1931, at his rural home near Pine Bluff.

Those present other than the host were: J. W. Seales, J. E. Gill, J. S. Davidson, Charles Higinbotham, O. C. Hankison, W. T. Lowe, J. T. Palmer, Jr., B. D. Luck, Jr., W. H. Blankenship, O. W. Clark, W. H. Simmons, J. F. Crump, J. L. Lemons, C. B. Capel, W. G. Pittman, A. A. Hughes, C. K. Carruthers, T. J. Cunningham, J. O. Gurney, J. S. Spillyards and A. W. Troupe.

Pulaski County Medical Society gave a Testimonial dinner in honor of Dr. D. A. Rhinehart, President of the Arkansas Medical Society, at the Albert Pike Hotel, November 2, 1931. Dr. A. C. Shipp was toastmaster.

The program was as follows:

"What Does Fort Smith Think of Our President"—Dr. S. J. Wolfermann, Fort Smith.

"What Good Can One Rhinehart Say of Another Rhinehart?"—Dr. B. A. Rhinehart, Little Rock.

"Why Hot Water Baths for the President?"—Dr. J. King Wade, Hot Springs.

"Why Oil for the President?"—Dr. Elmer J. Munn, El Dorado.

"Dr. Rhinehart's Relations to the Country Doctor?"—Dr. A. G. Harrison, Searcy.

"Mental Sedatives for the President"—Dr. Frank Vinsonhaler, Dean of the Medical School, Little Rock.

Response by Dr. D. A. Rhinehart, President of the Arkansas Medical Society.

The First Counciler District and Northeast Arkansas Medical Society held its fall meeting at Jonesboro, October 15, being entertained by the Craighead-Poinsett County Medical Society. The meeting was called to order at 10:00 a. m. by the president, Dr. J. H. Lamb of Paragould.

Physicians and their wives were in attendance from the following surrounding towns: Wilson Osceola, Blytheville, Monette, Lake City, Paragould, Rector, Brookland, Harrisburg, Trumann, Tyronza, Imboden, Black Rock, Portia, Marion, Smithville, Walnut Ridge, Cash, Nettleton, Little Rock and Memphis.

The program was as follows:

Invocation—Rev. Dow Heard, Jonesboro.

Address of Welcome on behalf of Jonesboro and the Craighead-Poinsett County Medical Society—Dr. Ralph Sloan, Jonesboro.

Response to the Address of Welcome—Dr. A. G. Henderson, Imboden.

"Tularemia"—Dr. Wm. J. Sheddan, Osceola. Discussed by Dr. E. L. Kennedy, Marmaduke.

"Trends in Medicine"—Dr. D. A. Rhinehart, President, Arkansas Medical Society, Little Rock.

"Tonsils"—Dr. Chas. A. Bates, Lake City. Discussed by Dr. G. A. Warren, Black Rock.

The Counciler's Address was delivered during the luncheon hour. Dr. Ralph Sloan was toastmaster.

Afternoon Session

"Medical Legislation"—Dr. L. V. Parmley, Chairman, Committee on Medical Legislation, Arkansas Medical Society, Little Rock.

"Diagnosis and Treatment of Knee Joint Conditions"—Dr. F. W. Carruthers, Little Rock. Discussed by Dr. Henry G. Hill, and Dr. E. M. Holder, Memphis.

"Early Diagnosis and Surgical Treatment of Perfected Gastric Ulcers" with Case Report—Dr. Robt. Haley, Jr., Paragould. Discussed by Dr. L. C. McVay, Marion, and Dr. E. M. Holder and Dr. Shields Abernathy, Memphis.

"Obstetrical Death Rate"—Dr. J. T. Altman, Jonesboro. Discussed by Dr. G. A. Warren and Dr. L. C. McVay.

Dr. J. C. Land, Walnut Ridge, was elected president and Dr. Robert Haley, Jr., Paragould, Vice-President. Dr. F. D. Smith, Blytheville was re-elected secretary-treasurer. Dr. W. M. Majors, Paragould, is counciler of the district.

Walnut Ridge was selected as the place of the spring meeting, 1932.

SECOND COUNCILOR DISTRICT

The meeting of the Second Councilor District Medical Society met in Batesville, at the Marvin Hotel, October 14, 1931, with the following present: E. M. Gray, Evening Shade; J. T. Matthews and J. M. Wall, Heber Springs; V. D. McAdams, Cord; J. H. Kennerly, C. G. Hinkle, F. A. Gray, L. T. Evans, C. A. Churchill, O. J. T. Johnston, M. S. Craig, and H. C. Jones, Batesville; G. T. Lamon, and I. M. Husky, Cave City; Porter R. Rogers, O. Parker, A. G. Harrison, and Sam J. Allbright, Paul H. Jeffery, Bethesda; E. L. Sullivan, Poughkeepsie; T. E. Johnson, Bald Knob; O. L. Bone, Newport; W. A. Wyatt, Rosie; S. N. Robertson, Sulphur Rock; A. M. Elton, Newport.

Visitors were: J. L. Weathers, Salem; J. D. Smith, Violet Hill; C. L. Harris, E. A. Baxter, and R. L. Smith, Melbourne; J. H. Smith, Oxford; T. C. Guthrie, Smithville; Noel Capp, Calico Rock; S. F. Hoge, L. V. Parmley, H. W. Hundling, S. C. Fulmer, D. A. Rhinehart, and F. Walter Carruthers, Little Rock; H. B. Gotten and R. L. Saunders, Memphis, Tenn.

The following program was rendered:

Address—D. A. Rhinehart, Little Rock, President, Arkansas Medical Society.

"Troublesome Cervix Uteri as Seen by the General Practitioner"—R. L. Saunders, Memphis.

"Intestinal Invalidism"—S. F. Hoge, Little Rock.

"Etiological, Anatomical and Physiological Factors in Heart Diseases"—S. C. Fulmer, Little Rock.

"Medical Legislation"—L. V. Parmley, Little Rock.

Officers elected for the ensuing year are: President, L. T. Evans, Batesville; Vice-President, A. G. Harrison, Searcy, and Secretary, O. J. T. Johnston, Batesville.

Searcy was selected for the next meeting place, which will be held in April, 1932.

Auxiliary Notes

(Reported by Mrs. Marcus T. Smith, Sec.)

The seventh annual business meeting of the Arkansas Medical Society Auxiliary opened at 2:15 p. m., April 21, 1931, at the McCartney Hotel, Texarkana.

The meeting was called to order by Mrs. Wm. Hibbits, President of Miller-Bowie Counties Auxiliary.

Invocation—Rev. J. S. Sleeper, Pastor, First Presbyterian Church.

Vocal Solos—Miss Ruth Walker, accompanied at the piano by Mrs. Preston Hunt.

Address of Welcome—Mrs. S. A. Collom.

Response to the Address of Welcome—Mrs. H. H. Smith, Fort Smith.

Address—Dr. E. E. Barlow, Dermott, President, Arkansas Medical Society.

A brief talk by Mrs. C. R. Gowan, Vice-President, Louisiana State Medical Society.

Mrs. Chas. E. Oates, President, announced her committee on resolutions as follows: Mrs. E. H. White, Little Rock; Mrs. E. E. Barlow, Dermott; and Mrs. M. C. John, Stuttgart.

Mrs. E. L. Beck reported eighteen guests and thirteen delegates present.

Wednesday, April 22, the second business session was called to order by Mrs. Oates, President. After the reading of the minutes, the annual report of the board meeting and reports of the treasurer, publicity secretary, historian, organization, necrology, student loan, education and public health, and Hygeia followed.

Ten counties sent in full reports. Mrs. W. R. Brooksher, Jr., Fort Smith, gave the report of the Woman's Auxiliary to the American Medical Association. Mrs. Elizabeth P. Kilbury, Little Rock, reported the work of the Woman's Auxiliary to the Southern Medical Association.

Mrs. E. L. Beck read the report of the nominating committee:

President—Mrs. W. R. Brooksher, Jr., Fort Smith.

President-Elect—Mrs. P. H. Phillips, Ashdown.

Vice-President—Mrs. Barton A. Rhinehart, Little Rock.

Treasurer—Mrs. G. A. Herbert, Hot Springs.

Publicity—Mrs. Marcus T. Smith, Conway.

Parliamentarian—Mrs. Wm. Hibbitts Texarkana.

Historian—Mrs. C. W. Garrison, Little Rock.

Directors, Two Years—Mrs. M. V. Russell, El Dorado; Mrs. J. B. Crawford, Little Rock.

On the motion of Mrs. K. W. Crosgrove, the slate was voted upon as a whole. The vote by ballot was unanimous.

Mrs. Beck reported thirty-seven visitors, twenty-nine delegates, with fifty registered for the luncheon.

The final session was held at the Texarkana Country Club. During the luncheon, at which Mrs. Wm. Hibbitts was toastmistress, the Texas High School quartet rendered four excellent vocal selections. Mrs. Dewell Gann was introduced by Mrs. Hibbitts as one of our first presidents. Mrs. Gann has attended forty-three State medical meetings.

Mrs. Chas. E. Oates, president, delivered her address after which the new officers were installed and the session turned over to the newly installed president, Mrs. W. R. Brooksher, Jr. In Mrs. Brooksher's address she outlined her plans for the work of the coming year.

Two resolutions were introduced by Mrs. C. W. Garrison, regarding the student loan fund; one of which suggested that the fund be known as the Ilse F. Oates Loan Fund which was unanimously adopted.

The Woman's Auxiliary to the Pulaski County Medical Society held its first fall meeting this year, October 21, with a luncheon at the Albert Pike Hotel, followed by a bridge party. For luncheon, covers were laid for thirty-five guests who were seated at one large table. After luncheon, six tables were arranged for bridge and a prize was awarded at each table. Arrangements for the party were made by members of the entertainment committee, Mrs. M. J. Kilbury, chairman.

Obituary

LOGAN, BENJAMIN C.—Dr. B. C. Logan of Morrilton, aged 56, died October 31, 1931. He was graduated from The Louisville Medical College in 1902, and had practiced medicine in Morrilton since that time.

Surviving are his wife, his mother, Mrs. T. Logan of Morrilton, and a brother T. J. Logan of Conway.

DeCLARK, WILLIAM HENRI—Dr. W. H. DeClark of McGehee, aged 45, died of tuberculosis October 30, 1931. He was graduated from the University of Arkansas School of Medicine in 1914.

Surviving are his wife and one child.

GARDNER, WILLIAM PRESTON—Dr. W. P. Gardner of Texarkana, aged 38, died October 10, 1931. He underwent a major operation upon his return from Kilgore, Texas, where he was in charge of the Texarkana National Guard unit during the martial law rule in the Texas oil field. He was unmarried.

SMITH, HARLIN H.—Dr. H. H. Smith of Calico Rock, aged 48, died October 14 1931. His death was the result of a cerebral hemorrhage, having been stricken while driving an automobile enroute to Little Rock.

Dr. Smith had practiced medicine at Calico Rock for the past twenty-five years, and was well known throughout the State through his radio broadcastings.

He is survived by his wife, a sister, Mrs. Bob Woods, and two brothers, Ben of Okmulgee, Okla., and Ambrose of Kansas City, Mo.

"Properly to practise medicine one must assume the responsibility for his patient. He must remember that on his human understanding and on his personal advice and encouragement and explanation depend that patient's health and futnre."—*Chronic Arthritis and Rheumatoid Affections, by Wyatt.*

Book Reviews

Bulletin of the National Research Council, No. 83—A Compend of the Statute Law of Coroners and Medical Examiners in the United States. By George H. Weinmann. Issued under the Auspices of the Committee on Medicolegal Problems, National Research Council. Published by the National Research Council of The National Academy of Sciences, Washington, D. C., 1931. Price, $3.00.

Tables of Food Values—By Alice V. Bradley, B. S., Supervisor and Instructor of Nutrition and Health Education, State Teachers' College, Santa Barbara, California. Published by The Manual Arts Press, Peoria, Illinois. Price, $2.00.

Physicians doing metabolic work will find this book helpful. It is the outgrowth of the demand for tables which will facilitate the calculation of diets by giving a complete classification of foods, such as cereals, fruits, vegetables, etc., and showing their respective values in the diet, as far as present-day scientific information permits. All the essential data needed for calculating the nutritive value of a given food are found in one table.

Manual of the Diseases of the Eye. For Students and General Practitioners. By Charles H. May, M. D., Directors and Visiting Surgeon, Eye Service, Bellevue Hospital, New York, 1916 to 1926. Thirteenth Edition, revised. With 374 original illustrations, including 23 plates, with 73 colored figures. Published by William Wood and Company, 156 Fifth Avenue, New York. Price, $4.00 net.

A demand for another edition speaks well for this manual on diseases of the eye. The author has endeavored to give the fundamental facts of ophthalmology and to cover all that is essential in this branch of medicine, keeping in mind that the book has been written for students and practitioners. The book is well illustrated with 73 colored figures.

Treatment in General Practice. By Harry Beckman, M. D., Professor of Pharmacology, Marquette University Medical School, Milwaukee, Wisconsin. Octavo volume of 899 pages. Published by W. B. Saunders Company, Philadelphia. Cloth, $10.00 net.

This volume splendidly presents a description and treatment of the most common diseases found in the general practice of medicine.

Beginning with infectious diseases, then diseases caused by flukes, worms, diseases of allergy, deficiency, metabolism, gastro-intestinal tract, respiratory tract, kidneys, blood-forming organs, circulatory system, disturbances of the thyroid gland, genito-urinary infections and stone, diseases of the nervous system, skin, acute poisoning, burns, and obstetrics.

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1929—Volume XXI. Edited by Mrs. M. H. Mellish, Richard M. Hewitt, M. D., and Mildred A. Felker, B. S. Octavo volume of 1,197 pages with 279 illustrations. Published by W. B. Saunders Company, Philadelphia, Pa. Price, Cloth, $13.00 net.

This volume is composed of material selected from 471 papers written by the Mayo Clinic and the Mayo Foundation.

It is divided into papers on the alimentary tract; genito-urinary organs; ductless glands; blood and circulatory organs; skin and syphilis; head, trunk and extremities; chest; brain, spinal cord and nerves; technic, and miscellaneous. Included in this latter group we wish to mention a few: "The Doctor and His Patient," "Nursing and Hospital Care for Individuals in Moderate Circumstances," both by William J. Mayo. "Some Suggestions For the Improved Training of the Medical Specialist," by Louis B. Wilson.

Surgical Diagnosis. By 42 American authors. Edited by Evarts A. Graham, M. D., Professor of Surgery, Washington University Medical School. Three octavo volumes, totaling 2,750 pages, containing 1,250 illustrations, and separate index volume. Published by W. B. Saunders Company, Philadelphia. Cloth, $35.00 a set.

These three volumes prepared by several of our most eminent surgeons place emphasis on the great importance of surgical diagnosis and make helpful suggestions for the general surgeon to follow.

Useful and practical laboratory examinations are given which greatly add to the value of the book. As the editor says: "Bedside methods have been and are of the greatest possible value, but the practitioner who relies exclusively on these methods should sell his automobile and go back to the horse and buggy; for the day of the exclusive use of bedside diagnostic methods belong to the era of "Old Dobbin." On the other hand, it is equally futile to rely too much on laboratory methods to the exclusion of careful histories and physical examination."

Simple Lessons in Human Anatomy—By B. C. H. Harvey, M. D., Professor of Anatomy, University of Chicago. Published by The American Medical Association, 535 North Dearborn Street, Chicago. Price, $2.00, postpaid.

This is, we believe, perhaps the first popular treatise on anatomy made generally available. It is fully illustrated, and at the same time authoritative.

Throughout this book Dr. Harvey discusses anatomy in relationship to functions that constantly go on in the living body.

Every physician will enjoy reading this book. In the first few pages a chart is inserted by special arrangement of a publishing house in Germany, showing a mechanical and simple idea of some of the important engines of the body. We quote the author's last paragraph:

"Our past is almost infinite. What of the future? The long series of germ bodies will go on. They have changed slowly in the past, constantly being made over and steadily approaching the present form. Change is constant. It is going on. It will go on. We do not know what we shall be, but in the light of our past we must expect the age-long progress to continue.

"Men perish but man shall endure.
Lives die but the life is not dead."

"As human life continues through the millions of future years that the astronomers predict for it, it is likely to fashion from the bodies it inherits better mansions for better men."

The Collected Papers of the Mayo Clinic and the Mayo Foundation for 1930. Volume XXII. Edited by Mrs. Maud H. Mellish-Wilson, Richard M. Hewitt, B. A., M. A., M. D., and Mildred A. Felker, B. S. Octavo volume of 1,125 pages with 234 illustrations. Published by W. B. Saunders Company, Philadelphia. 1931. Cloth, $13.00 net.

Among the interesting articles in this issue, numbering 482, we wish to refer to "'Gastric Syphilis" by Dr. Eusterman, in which he says regarding the diagnosis that a case of gastric syphilis is not proved without histologic or bacteriologic confirmation.

"Epidermophytosis of the Hands and Feet," by Dr. Goecherman deserves comment on account of the frequency of this disease.

Space does not permit a review of the other topics of interest.

Text-Book of Gynecology. By Arthur H. Curtis, M. D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecological Service, Passavant Memorial Hospital, Chicago. 380 pages with 222 original illustrations. Published by W. B. Saunders Company. Cloth, $5.00.

The author presents in this small volume a record of personal experience. There are over 200 illustrations and except in four instances they are actual reproductions from Dr. Curtis' personal cases.

Section one, describes "Infectious Processes"; Section two, "Tumors of the Uterus"; Section three, "Tumors of the Ovary"; Section four, "Displacements and Relaxations"; Section five, "Disturbances of Function"; Section six, "Special Diseases and Important Symptom Complexes"; Section seven, "Other Gynecological diseases and Symptom Complexes", and Section eight, "Special Subjects."

Chronic Arthritis and Rheumatoid Affections, With Recovery Record. By Bernard Langdon Wyatt, M. D., F. A. C. P., Director, The Wyatt Clinic; Member, Editorial Staff of "Acta Rheumatologica" of the International League Against Rheumatism. With the Collaboration of Louis I. Dublin. Ph.D., Statistician, The Metropolitan Life Insurance Company, New York. And Foreword by Dr. J. Van Breemen, Honorary Secretary and Director of Advisory Bureau, The International League Against Rheumatism, Amsterdam, Holland. Published by William Wood and Company, 156 Fifth Avenue, New York. Price, $2.50 net.

In referring to this book, nothing of more interest can be said than repeating the author's preface.

"In chronic arthritis and rheumatoid conditions—which today rank as the leading causes of illness in the United States—successful treatment involves, among other factors, the presentation of basic information concerning their nature, causes and methods of cure. Experience has clearly demonstrated that this is essential, since upon the physician's ability as a teacher will depend, in a large measure, the outcome of his efforts as a clinician.

It is hoped that the patient as well as the general practitioner will find this book of value. To assist in the development of the closest co-operation between the physician and his patient, without countenancing either self-diagnosis or self-treatment, has been constantly in mind.

The highly important fact that these diseases are, to a great extent, both preventable and curable has been given the emphasis that so significant a reality merits. When the joint structures are destroyed they cannot be replaced with new parts, as in an automobile, but the time has passed when such developments may be regarded as forming an integral part of the picture in any considerable number of instances.

Should this volume further the realization of any of these concepts, though it may be ever so little, the author will feel amply repaid for all of the labor that its preparation has entailed.

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Duncan, M. W. — Centerton
Estes, Neil — Rogers
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Greene, L. O. — Pea Ridge
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Seeborn, N. A. — Kansas City, Mo.
Thompson, J. S. — Gravette
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Fike, W. T. — Warren
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Martin, C. N. — Warren
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Rhine, T. E. — Thornton

*Deceased.

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Easterling, Walter D. — Lake Village
Easterling, W. W. — Eudora
Hutson, Wm. J. — Eudora
McGehee, E. P. — Lake Village
Thompson, J. A. — Dermott

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Moore, J. S. — Arkadelphia
Moore, W. M. — Arkadelphia
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Rowland, W. T. — Arkadelphia
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McGuire, J. E. — Piggott
Poole, W. I. — St. Francis
Richardson, M. C. — Corning

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Carrington, H. K. — Magnolia
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Horn, W. H. — Taylor
Hudnall, E. T. — Taylor
Hunt, W. J. — R. 3, Magnolia
Jones, T. H. — Magnolia
Jordan, T. S. — Taylor
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McDonald, A. J. — Springhill, La.
McLeod, G. F. — Magnolia
McWilliams, C. T. — Magnolia
Smith, P. M. — New Orleans, La.
Souter, A. J. — Waldo
Walker, J. C. — R. 1, Emerson
Welbourn, C. E. — Magnolia

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Jackson, J. H. — Springfield
Jones, R. A. — Perry
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Matthews, J. M. — Morrilton
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Haltom, W. C. — Jonesboro
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*Hunn, J. T. — Harrisburg
Jackson, W. W. — Jonesboro
Jernigan, Roscoe M. — Jonesboro
Lutterloh, Chas. H. — Jonesboro
Lutterloh, P. W. — Jonesboro
McAdams, H. H. — Jonesboro
McCurry, John H. — Cash
McDaniel, L. H. — Tytonza
Nisbett, Frank — Brookland
Overstreet, W. C. — Jonesboro
Ramsey, J. W. — Jonesboro
Ratliff, R. W. — Jonesboro
Reagan, C. H. — Lake City
Sloan, Ralph M. — Jonesboro
Stroud, H. A. — Jonesboro
Verser, W. W. — Harrisburg
Willett, R. H. — Jonesboro

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Bourland, O. M. — Van Buren
Dibrell, M. S. — Van Buren
Galloway, Q. R. — Van Buren
Kirksey, O. J. — Mulberry
Mitchell, T. M. — Rudy
Reves, Wm. R. — Alma
Savery, H. W. — Van Buren
Stewart, Jno. M. — Van Buren
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Stewart, Thos. J. — Wynne
Wilson, Thos. — Wynne

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Cheatham, H. A. — Princeton
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MacCammon, Vernon — Arkansas City
Miller, J. C. — McGehee
Smith, H. T. — McGehee
Watts, J. D. — Dumas
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DeBolt, G. A. — Monticello
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Pope, M. Y. — Monticello
Smith, R. N. — Collins
Wilson, J. S. — Monticello

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Dunaway, L. S. — Conway
Fraser, N. E. — Conway
Glover, A. J. — Guy
Hardy, H. B. — Greenbrier

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McMahan, J. E. ..... Conway
Munn, J. B. ..... Vilonia
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Smith, Marcus T. ..... Conway
Westerfield, J. S. ..... Conway

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Hansberry, A. J. ..... Ozark
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Post, J. L. ..... Altus

GARLAND COUNTY

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Biggs, Orvis ..... Hot Springs
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Blackshare, Wilbur M. ..... Hot Springs
Bollmeier, L. N. ..... Mountain Pine
Brewer, H. W. ..... Hot Springs
Browne, P. Z. ..... Hot Springs
Browning, E. R. ..... Hot Springs
Cassada, B. F. ..... Hot Springs
Chamberlain, Warren ..... Hot Springs
Chesnutt, Jas. H. ..... Hot Springs
Clardy, Floyd ..... Hot Springs
Coffey, G. C. ..... Hot Springs
Collings, H. P. ..... Hot Springs
Connell, W. H. ..... Hot Springs
Deaderick, W. H. ..... Hot Springs
Diederich, V. P. ..... Hot Springs
Drennen, Chas. Travis ..... Hot Springs
*Drennen, D. E. ..... Hot Springs
Duncan, M. D. ..... Mountain Pine
Eckel, G. M. ..... Hot Springs
Ellis, L. R. ..... Hot Springs
Fletcher, Geo. B. ..... Hot Springs
Freeman, I. N. ..... Hot Springs
Garratt, C. E. ..... Hot Springs
Hebert, Gaston A. ..... Hot Springs
Jackson, W. W. ..... Hot Springs
Jarrell, Foster ..... Hot Springs
King, Ossian H. ..... Hot Springs
Klugh, Walter G. ..... Hot Springs
Knoefel, W. R. ..... Hot Springs
Lautman, M. F. ..... Hot Springs
Laws, W. V. ..... Hot Springs
Lee, D. C. ..... Hot Springs
Lynch, H. O. ..... Hot Springs
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MacLaughlin, O. L. ..... Hot Springs
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Merritt, J. F. ..... Hot Springs
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Minor, J. C. ..... Hot Springs
Mobbs, Bert ..... Honolulu, Hawaii
Moss, Chas. S. ..... Hot Springs
Nims, C. H. ..... Hot Springs
Parks, Wm. P. ..... Hot Springs
Pate, C. N. ..... Hot Springs
Porter, Wm. F. ..... Hot Springs
Preston, H. H. ..... Hot Springs
Proctor, J. M. ..... Hot Springs
Purdum, E. A. ..... Hot Springs
Randolph, J. P. ..... Hot Springs
Robertson, J. A. ..... Hot Springs
Rowland, J. F. ..... Hot Springs
Sanders, T. E. ..... Hot Springs
Scully, F. J. ..... Hot Springs
Sharpe, S. B. ..... Hot Springs
Shaw, Ernest ..... Hot Springs
Shaw, J. B. ..... Hot Springs
Short, Z. N. ..... Hot Springs
Simpson, W. F. ..... Hot Springs
Smith, Euclid ..... Hot Springs
Smith, W. K. ..... Hot Springs
Snider, W. L. ..... Hot Springs
Speidel, Roy E. ..... Hot Springs
Steele, S. B. ..... Hot Springs
Stell, J. S. ..... Hot Springs
Stough, D. B. ..... Hot Springs
Strachan, J. B. ..... Hot Springs
Sullivan, A. G. ..... Hot Springs
Tarkington, Grayson E. ..... Hot Springs
Tarleton, F. S. ..... Hot Springs
Thompson, E. L. ..... Hot Springs
Thompson, Loyd ..... Hot Springs
Tribble, A. H. ..... Hot Springs
Vaughan, P. T. ..... Hot Springs
Wade, H. King ..... Hot Springs
Waldrop, J. G. ..... Hot Springs
Weil, S. D. ..... Hot Springs
Wenger, O. C. ..... Hot Springs
Wilkins, J. S. ..... Hot Springs
Wootton, W. T. ..... Hot Springs
Wright, Homer K. ..... Hot Springs

*Deceased.

GRANT COUNTY

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Hope, O. W. ..... Sheridan
Kelly, O. R. ..... Sheridan
Paxton, Robert L. ..... Sheridan
Sheppard, Irvin ..... Sheridan

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*Castleberry, F. L. ..... Jonesboro
Clopton, O. H. ..... Marmaduke
Cohn, George ..... Piggott
Dillman, James A. ..... Paragould
Ellington, Walter E. ..... R. 6, Paragould
Haley, R. J. ..... Paragould
Hardesty, C. A. ..... Paragould
Hudgins, J. J. ..... Paragould
Kennedy, E. L. ..... Marmaduke
Lamb, Jones H. ..... Paragould
Majors, W. M. ..... Paragould

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Autrey, J. R. ..... Columbus
Cannon, G. E. ..... Hope
Carrigan, P. B. ..... Hope
Garner, W. M. ..... Hope
Gentry, J. E. ..... McCaskill
Lile, L. M. ..... Hope
Luck, J. L. ..... Hope
McDonald, Thos. Lee ..... Hope
Martindale, Geo. H. ..... Hope
Martindale, J. G. ..... Hope
Robins, Wm. F. ..... Ozan
Smith, Don ..... Hope
Weaver, J. H. ..... Hope

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Hodges, W. G. ..... Malvern
McCray, E. H. ..... Malvern
Norton, J. M. ..... Donaldson
Pharr, J. W. ..... Malvern
Prickett, Chas. ..... Malvern
Williams, J. M. ..... Malvern

HOWARD-PIKE COUNTY

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Gibson, W. M. ..... Nashville
Gosnell, C. E. ..... Bingen
Holcombe, J. F. ..... Mineral Springs
Holt, J. M. ..... Nashville
Hopkins, J. S. ..... Nashville
Hutcherson, D. A. ..... Nashville
Roberts, J. L. ..... Nashville
Stokes, B. S. ..... Center Point

INDEPENDENCE COUNTY

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Churchill, C. A. ..... Batesville
Dorr, R. C. ..... Batesville
Evans, L. T. ..... Batesville
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Gray, E. M. ..... Evening Shade
Haskey, J. M. ..... Morefield
Hinkle, Chas. G. ..... Batesville
Hooper, J. M. ..... Batesville
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Rodman, T. N. ..... Batesville
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Sullivan, E. L. ..... Poughkeepsie
Wood, O. S. ..... Salem

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Kimberlin, K. K. ..... Tuckerman
Norris, R. O. ..... Tuckerman
Owens, M. B. ..... Amagon
Pierce, W. N. ..... Tupelo
Slayden, L. T. ..... Tuckerman
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Walker, H. O. ..... Newport
Watson, E. L. ..... Newport

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Crump, J. F. ..... Pine Bluff
Cunningham, T. J. ..... Pine Bluff
Davidson, J. S. ..... Pine Bluff
Gill, J. F. ..... Pine Bluff
Gurney, J. O. ..... Pine Bluff
Hankinson, O. C. ..... Pine Bluff
Hayes, Geo. A. ..... Pine Bluff
Higinbotham, C. J. ..... Pine Bluff
Hughes, A. A. ..... Pine Bluff
Jenkins, J. S. ..... Pine Bluff
John, J. W. ..... Pine Bluff
Lemons, J. M. ..... Pine Bluff
Lowe, W. T. ..... Pine Bluff
Luck, B. D. ..... Pine Bluff
McMullen, E. C. ..... Pine Bluff
Palmer, J. T. ..... Pine Bluff
Pittman, W. G. ..... Pine Bluff
Power, Paul H. ..... Pine Bluff
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Simmons, Walter H. ..... Pine Bluff
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Tankersley, Grace ..... Pine Bluff
*Williams, Harry E. ..... Pine Bluff
Woods, R. P. ..... Altheimer

JOHNSON COUNTY

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Burgess, Roy E. ..... Ward
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Hardgrave, G. L. ..... Clarksville
Hunt, E. H. ..... Clarksville
Hunt, Wm. R. ..... Clarksville
Kolb, James M. ..... Clarksville
Kolb, J. S. ..... Clarksville
Manley, R. N. ..... Clarksville
Siegel, G. R. ..... Clarksville
Thompson, Ewell ..... Little Rock

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Baker, F. E. ..... Stamps
Keith, A. W. ..... Stamps
McKnight, J. F. ..... Walnut Hill
Youmans, F. W. ..... Lewisville

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Allen, Marshall ..... Walnut Ridge
Ball, C. C. ..... Ravenden
Guthrie, T. C. ..... Smithville
Hatcher, Wright W. ..... Imboden
Hughes, J. C. ..... Hoxie
Land, J. C. ..... Walnut Ridge
McCarroll, H. R. ..... Walnut Ridge
Neece, T. C. ..... Walnut Ridge
Robinson, W. J. ..... Portia
Warren, G. A. ..... Black Rock
Watkins, Geo. Max ..... Walnut Ridge

LEE COUNTY

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Beaty, W. S. ..... R. 1, Aubrey
Bogart, H. D. ..... Marianna
Crawford, W. S. ..... Marianna
Hodge, N. C. ..... Marianna
Lewis, John F. ..... R. 1, Marianna
Russwurm, S. C. ..... Hughes
Wall, E. D. ..... Marianna
White, H. L. ..... Rondo
Williamson, O. L. ..... Marianna

LINCOLN COUNTY

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Dixon, Chas. W. ..... Gould
McClendon, J. M. ..... Gould
Ringgold, G. W. ..... Gould
Thiolliere, A. C. ..... Gould

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Castile, Herman ..... Foreman
Heller, H. E. ..... Foreman
Phillips, Paul H. ..... Ashdown
Ringgold, J. W. ..... Ashdown
Vaughan, W. E. ..... Rt. 2, Ashdown
York, W. W. ..... Ashdown

LONOKE COUNTY

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Benton, T. E. ..... Lonoke
Brewer, John F. ..... Kerr
Callahan, E. A. ..... Carlisle
Corn, F. A., Jr. ..... Lonoke

LONOKE COUNTY—Continued

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Cunning, John R. — Lonoke
Cunning, John Ed — Colorado Springs, Colo.
Ellis, C. S. — Lonoke
Harris, Ernest H. — Coy
Kelly, M. D. — Lonoke
Scruggs, G. W. — Humnoke
Street, H. N. — Lonoke
*Thibault, Henry — Scott
Utley, F. E. — Cabot
Ward, O. D. — England
Watson, Asa C. — Seminole, Okla.
Wells, John B. — Scott

MADISON COUNTY

Acree, W. E. — Huntsville
Counts, Geo. D. — Wesley
Dixon, C. B. — Kingston
Hill, N. J. — Hindsville
Youngblood, Fred — Huntsville

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Beck, E. L. — Texarkana
Collom, S. A. — Texarkana
Dale, R. R. — Texarkana
Fuller, T. E. — Texarkana
*Gardner, W. P. — Texarkana
Hibbetts, Wm. — Texarkana
Hunt, Preston — Texarkana
Kirkpatrick, R. R. — Texarkana
Kittrell, T. F. — Texarkana
Kosminsky, L. J. — Texarkana
Lanier, L. H. — Texarkana
Lee, A. G. — Texarkana
Lennard, F. M. — Texarkana
Longino, H. E. — Texarkana
Mann, A. H. — Texarkana
*Mann, R. H. T. — Texarkana
Middleton, B. C. — Texarkana
Murry, H. E. — Texarkana
Smiley, H. H. — Texarkana
Smith, J. K. — Texarkana
Smith, Wm. Decker — Texarkana
Webster, H. R. — Texarkana
Williams, J. T. — Texarkana

MISSISSIPPI COUNTY

Barksdale, Oscar — Wilson
Barrett, E. R. — Wilson
Campbell, J. H. — Joiner
Crawford, H. F. — Memphis, Tenn.
Fox, V. R. — Manila
Harwell, C. M. — Osceola
Johnson, I. R. — Blytheville
Saliba, J. A. — Blytheville
Sheddan, W. J. — Osceola
Sims, H. C. — Burdette
Smith, F. D. — Blytheville
Tipton, Paul L. — Blytheville
Washburn, A. M. — Blytheville

MONROE COUNTY

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Bradley, W. T. — Blackton
Dozier, F. S. — Brinkley
Dunklin, A. J. — Clarendon
Henry, C. A. — DeWitt
Martin, W. H. — Holly Grove
McKnight, C. H. — Brinkley
McKnight, E. D. — Brinkley
Murphey, N. E. — Clarendon
Nederhiser, M. I. — Brinkley
*Stout, L. H. — Brinkley
Terry, P. E. — Holly Grove

MONTGOMERY COUNTY

Freeman, W. D. — Mount Ida
McLean, J. H. — Caddo Gap
Robbins, J. D. — Oden

NEVADA COUNTY

Buchanan, A. S. — Prescott
Buchanan, G. A. — Prescott
Chastain, J. S. — Prescott
Dickey, A. B. — Prescott
Hesterly, J. B. — Prescott
Hesterly, S. J. — Prescott
Hirst, O. G. — Prescott
Pool, W. B. H. — Bodcaw
Shell, E. E. — Prescott

OUACHITA COUNTY

Byrd, E. J. — Camden
Clemens, J. P. — Mt. Holly
Early, C. S. — Camden
Hathcock, Edmond L. — R. 2, Bearden
Hollingsworth, G. F. — Hampton
Jameson, J. B. — Camden
Kennedy, R. C. — Bearden

*Deceased.

OUACHITA COUNTY—Continued

McGill, S. D. — Camden
Partee, Norf G. — Stephens
Powell, B. V. — Camden
Purifoy, W. A. — Chidester
Rinehart, J. S. — Camden
Ritchie, C. E. — Ogemow
Robins, R. B. — Camden
Rushing, J. L. — Chidester
Sanders, Geo. P. — Stephens
Thompson, H. F. — Bearden
Thompson, S. A. — Stephens
Word, N. S. — Camden
Worthington, W. L. — Camden

PHILLIPS COUNTY

Baker, J. P. — West Helena
*Bean, J. W. — Marvell
Brown, E. T. — Lexa
Bruce, W. B. — Marvell
Butts, J. W. — Helena
Cox, Allen E. — Helena
Cox, Aris W. — Helena
Ellis, J. B. — Helena
Fink, M. — Helena
Henry, Morris — Helena
King, W. C. — Helena
Nichols, J. W. — Helena
Orr, W. R. — Helena
Rightor, H. H. — Helena
Russwurm, W. C. — Helena
Storm, Geo. R. — West Helena

POLK COUNTY

Hawkins, B. H. — Mena
Hilton, J. G. — Mena
Johnson, C. F. — Hatfield
McElroy, F. Q. — Mena
Mullins, F. C. — Wicks
Watkins, P. R. — Mena

POPE COUNTY

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*Britt, J. B. — Tucker
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Gardner, L. — Russellville
Hood, Robt. — Russellville
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Montgomery, W. A. — Atkins
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Smith, L. M. — Russellville
Smith, R. L. — Russellville
Tate, A. B. — Atkins
Webb, G. C. — Russellville

PRAIRIE COUNTY

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Crockett, W. H. — Biscoe
Crow, L. M. — Des Arc
Gilliam, J. C. — Des Arc
Lynn, J. R. — Hazen
Parker, Luke — DeValls Bluff
Porter, T. G. — Hazen
Wilson, Jno. G. — Ulm

PULASKI COUNTY

Aday, L. C. — Little Rock
Allen, Hoyt R. — Little Rock
Arkebauer, C. A. — Little Rock
Atkinson, Shelby — North Little Rock
Bailey, W. E. — Little Rock
Barrier, L. F. — Little Rock
Bathurst, Wm. R. — Little Rock
Bennett, B. A. — Little Rock
Blakely, R. M. — Little Rock
Bond, S. P. — Little Rock
Brooks, C. M. — Little Rock
Browning, H. W. — Little Rock
Calcote, R. J. — Little Rock
Caldwell, Robert — Little Rock
Carruthers, F. W. — Little Rock
Caruth, O. A. — Little Rock
Cazort, Alan G. — Little Rock
Chesnutt, C. R. — Little Rock
Choate, H. L. — Little Rock
Compton, John N. — Little Rock
Coon, A. B. — Little Rock
Copp, Noel J. — Calico Rock
Cosgrove, K. W. — Little Rock
Crawford, J. B. — Little Rock
Crawford, S. R. — Little Rock
Cummins, Bryce — Little Rock
Cunningham, J. C. — Little Rock
Daly, M. G. — Little Rock
Darnall, R. F. — Little Rock
Davis, J. C. — Little Rock
Day, E. O. — Little Rock
Delaney, J. P. — Little Rock
Dibrell, J. L. — Little Rock
Dibrell, Jno. R. — Little Rock

PULASKI COUNTY—Continued

Dishongh, H. A. — Little Rock
Dunaway, W. C. — Little Rock
Eubanks, R. M. — Little Rock
Fly, T. M. — Little Rock
Freedman, Theo. — Little Rock
Freemyer, W. N. — Little Rock
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Fulmer, P. M. — Little Rock
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Garrison, C. W. — Little Rock
Gray, A. F. — Little Rock
Gray, Oscar — Little Rock
Gray, W. E. — Little Rock
Gray, Wm. E., Jr. — Little Rock
Hawkins, Martin C. — Little Rock
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Hayes, John H. — Little Rock
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Hoge, S. F. — Little Rock
Holmes, G. M. — Little Rock
Holloway, O. R. — Little Rock
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Howell, Stacy C. — Little Rock
Howze, H. H. — Little Rock
Hudson, E. M. — Little Rock
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Hundling, H. W. — Little Rock
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Jewell, I. H. — Paris
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Jones, J. E. — Little Rock
Jones, W. E. — Little Rock
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Kirby, A. C. — Little Rock
Kirkham, Z. L. — Little Rock
Kory, R. C. — Little Rock
Kriesel, W. A. — Little Rock
Lamb, W. A. — Little Rock
Law, R. A. — Little Rock
Lenow, Jas. H. — Little Rock
Levy, Jerome S. — Little Rock
Lewis, Geo. V. — Little Rock
McCaskill, M. E. — Little Rock
McCormack, G. A. — Little Rock
McNeil, N. P. — Little Rock
McKinney, A. T. — Little Rock
McRae, W. M. — Little Rock
Mahoney, P. L. — Little Rock
March, C. J. — Fordyce
Matthews, W. M. — Little Rock
May, C. B. — Little Rock
May, Jno. R. — Roland
Melson, Madeline — Little Rock
Melson, O. C. — Little Rock
Miller, W. H. — Little Rock
Moon, C. R. — Little Rock
Morrow, J. K. — Little Rock
Mountford, A. H. — North Little Rock
Murphey, Pat — Little Rock
Oates, Charles E. — Little Rock
O'Connor, F. J. — Little Rock
Parmley, L. V. — Little Rock
Patterson, R. Q. — Little Rock
Pemberton, E. M. — Little Rock
Ponder, E. T. — Little Rock
Pryor, R. E. — Little Rock
Reagan, G. W. — Little Rock
Reagan, L. D. — Little Rock
Reed, C. C. — Little Rock
Rhinehart, B. A. — Little Rock
Rhinehart, D. A. — Little Rock
Richardson, W. R. — Little Rock
Riegler, N. W. — Little Rock
Riste, Rose Alma — Ludhiana, Punjar, India
Robinson, F. C. — Little Rock
Roe, Joseph — Little Rock
Rogers, C. D. — Little Rock
Rosenbaum, C. A. — Little Rock
*Runyan, J. P. — Little Rock
Russell, Allen R. — Little Rock
Sadler, W. L. — Little Rock
Sanderlin, J. H. — Little Rock
Sanford, S. M. — Little Rock
Saxon, R. L. — Little Rock
Scott, Homer — Little Rock
Shearer, W. F. — Little Rock
Sheppard, J. P. — Little Rock
Shipp, A. C. — Little Rock
Shuffield, Jos. — Little Rock
Smith, Morgan — Little Rock
Smith, Randolph T. — Little Rock
Smith, W. F. — Little Rock
Snodgrass, W. A. — Little Rock
Snodgrass, W. A., Jr. — Little Rock
Spitzberg, Irving J. — Little Rock

PULASKI COUNTY—Continued

Stover, A. R. — Little Rock
Strauss, A. W. — Little Rock
Summers, J. A. — North Little Rock
Switzer, D. M. — North Little Rock
Tenzel Pauline — Little Rock
Thatcher, Harvey S. — Little Rock
Thomas, P. E., Jr. — Little Rock
Thompson, G. D. — Little Rock
Vinsonhaler, Frank — Little Rock
Walt, D. C. — Little Rock
Wassell, C. McA. — Little Rock
Watkins, Anderson — Little Rock
Watkins, John G. — Little Rock
Wayman, A. K. — Little Rock
Wayne, J. R. — Little Rock
Wayne, W. D. — Little Rock
Webb, V. T. — Little Rock
Weny, N. F. — Little Rock
White, E. H. — Little Rock
Wilkes, E. H. — Little Rock
Wilson, Paul W. — Little Rock
Witt, C. E. — Little Rock
Wyers, R. E. — Spadra, Calif.

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Hull, H. B. — Mammoth Springs

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Buckley, E. A. — Bauxite
Buffington, T. E. — Benton
Burks, J. A. — Benton
Corey, W. L. — St. Louis, Mo.
Davis, W. S. — Owensville
Gann, Dewell, Sr. — Benton
Jones, C. W. — Benton
Walton, Chas. R. — Knoxville, Iowa
Ward, W. W. — Alexander
Watson, Thos. C. — Benton
Wright, J. D. — Mabelvale

SCOTT COUNTY

Bevill, Cheves — Waldron
Burnett, J. A. — Waldron
Duncan, B. W. — Parks
Duncan, F. R. — Waldron
Duncan, L. D. — Waldron
Holitik, Geo. F. — Blue Ball
Jones, Paul — Mound Valley, Ks.
Sorrell, L. B. — Waldron

SEARCY COUNTY

Cotton, J. O. — Leslie
Daniel, Sam G. — Marshall
Dickens, G. W. — Leslie
Fendley, E. G. — Leslie
Henley, J. A. — Marshall
Leslie, J. O. — Marshall
Rogers, Wm. F. — St. Joe
Wood, E. W. — Marshall

SEBASTIAN COUNTY

Amis, J. W. — Fort Smith
Benefield, C. E. — Fort Smith
Benefield, J. H. — Fort Smith
Billingsley, C. B. — Fort Smith
Blair, A. A. — Fort Smith
Brooksher, W. R., Jr. — Fort Smith
Buckley, J. H. — Fort Smith
Bungart, C. S. — Fort Smith
Chapman, A. S. — Fort Smith
Coffman, J. S. — Lavaca
Dorente, D. R. — Fort Smith
Dorsey, H. C. — Fort Smith
Eberle, Walter G. — Fort Smith
Epler, E. G. — Fort Smith
Foltz, Jas. A. — Fort Smith
Foster, M. E. — Fort Smith
Freer, B. W. — Fort Smith
Fuller, S. J. — Magazine
Goldstein, D. W. — Fort Smith
Hall, Chas. W. — Greenwood

*Deceased.

SEBASTIAN COUNTY—Continued

Hoge, A. F. — Fort Smith
Holt, C. S. — Fort Smith
Honomichl, O. R. — Hackett
Jeffery, T. E. — Fort Smith
Jeffery, Vogel — Fort Smith
Johnson, Hugh — Fort Smith
Johnson, J. E. — Fort Smith
Johnson, M. C. — Fort Smith
Jones, E. B. — Hartford
Jones, I. Fulton — Fort Smith
Kennedy, C. H. — Fort Smith
King, H. C. — Fort Smith
Krock, F. H. — Fort Smith
Little, J. E. — Fort Smith
Means, C. S. — Fort Smith
Moulton, E. C. — Fort Smith
Moulton, Herbert — Fort Smith
Norton, J. W. R. — Rocky Mound, N. C.
Redman, Pierre P. — Fort Smith
Riddler, P. A. — Fort Smith
Riley, J. D. — State Sanatorium
Rose, Willis F. — Fort Smith
*Ryan, I. A. — Fort Smith
Scott, M. H. — Jenny Lind
Smith, H. H. — Fort Smith
Southard, J. D. — Fort Smith
Southard, J. S. — Fort Smith
Stevenson, E. H. — Fort Smith
Stevenson, J. E. — Fort Smith
Stubbs, S. P. — Fort Smith
Taylor, J. M. — Fort Smith
Ware, Bertram L. — Greenwood
Wilson, Cons P. — Fort Smith
Wolfermann, S. J. — Fort Smith
Woods, G. G. — Huntington
Wyatt, R. B. — Sulphur Springs

SEVIER COUNTY

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Graves, J. C. — Lockesburg
Hendrix, B. E. — Gillham
Hopkins, R. L. — DeQueen
Kitchens, C. E. — DeQueen
Norwood, M. L. — Lockesburg
Yates, E. W. — Gillham

ST. FRANCIS COUNTY

Bogart, J. A. — Forrest City
Bogart, Nall — Forrest City
Boggan, P. P. — Forrest City
Burch, W. D. — Hughes
Caldwell, A. B. — Caldwell
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McClendon, H. L. — Palestine
McDougal, J. F. — Forrest City
Polk, J. T. — Forrest City
Rush, J. O. — Forrest City
Winter, W. A. — Widener

UNION COUNTY

Bush, T. J. — El Dorado
Cathey, A. D. — El Dorado
Cullins, Jno. G. — No. Chicago, Ill.
Dickerson, D. A. — Berryville
Elkins, W. N. — Junction City
Engle, C. G. — El Dorado
Falvey, J. C. — El Dorado
Ferguson, J. V. — El Dorado
Fincher, L. G. — El Dorado
Fleming, J. W. — Gladewater, Tex.
Ginn, W. T. — Calion
*Guthrey, J. E. — El Dorado
Irby, Frank L. — Wesson
Levine, David — El Dorado
Lyon, G. C. — Norphlet
McCall, Daniel — Lawson
McGraw, S. J. — El Dorado
Mahony, F. O. — El Dorado
Mitchell, J. G. — El Dorado
Moody, T. C. — El Dorado
Moore, J. A. — El Dorado
Munn, E. J. — El Dorado
Murphy, Geo. D. — El Dorado
Murphy, G. W. T. — Strong
Murphy, H. A. — El Dorado
Newton, W. L. — Smackover

UNION COUNTY—Continued

Niehuss, H. H. — El Dorado
Patterson, W. L. — El Dorado
Prothro, E. W. — El Dorado
Purifoy, L. L. — El Dorado
Richardson, C. T. — Smackover
Ritterman, Henry — Norphlet
Rowland, R. E. — El Dorado
Russell, M. V. — El Dorado
*Sheppard, J. K. — El Dorado
Sheppard, J. M. — El Dorado
Slaughter, J. Henry — Norphlet
Slaughter, J. W. — El Dorado
Smith, J. M. — Smackover
Tarver, Vernon — Huttig
Vines, C. L. — El Dorado
Vines, F. P. — El Dorado
Wharton, J. B. — El Dorado
White, D. E. — El Dorado
Wozencraft, W. L. — El Dorado

WASHINGTON COUNTY

Bean, J. L. — Morrow
Brand, W. M. — Springdale
Briley, J. H. — Springdale
Callen, C. B. — Fayetteville
*Callen, L. H. — Fayetteville
*Cannon, J. S. — West Fork
Cooper, T. L. — Elm Springs
Ellis, E. F. — Fayetteville
Gilbert, A. A. — Fayetteville
Gray, Thos. E. — Winslow
Gregg, A. S. — Fayetteville
Harr, H. T. — Fayetteville
Hathcock, P. L. — Fayetteville
Henry, R. T. — Springdale
Kaemmerling, Gerhard — Fayetteville
McCormick, E. G. — Prairie Grove
Mock, W. H. — Prairie Grove
Moore, A. I. — Fayetteville
Morrow, F. R. — Fayetteville
Paddock, C. S. — Fayetteville
Riggall, Cecil — Prairie Grove
Roberts, D. C. — Fayetteville
Robinson, J. A. — Summers
Sisco, C. P. — Springdale
*Swift, Chas. E. — Elkins
Walker, J. W. — Fayetteville
Wallace, Jno. M. — Fayetteville
Wood, H. D. — Fayetteville

WHITE COUNTY

Abington, E. H. — Beebe
Allbright, S. J. — Searcy
Clark, W. A. — Bald Knob
Emerson, A. G. — Bradford
Felts, W. R. — Judsonia
Hardy, F. P. — Center Hill
Harrison, A. G. — Searcy
Havner, J. B. — Beebe
Hudgins, A. H. — Griffithville
Jones, J. L. — Searcy
Little, R. L. — Judsonia
Peeler, C. M. — Pangburn
Sloan, Dewey W. — Beebe
Sloan, J. R. — Garner
Spain, A. L. — Letona
Biles, L. E. — Augusta

WOODRUFF COUNTY

Brewer, E. F. — Augusta
Brown, E. B. — Cotton Plant
Dungan, C. E. — Augusta
Fraser, R. L. — McCrory
*Gephart, R. T. — Cotton Plant
Hays, J. F. — McCrory
Maguire, F. C. — Augusta
West, J. H. — Grays
Wilkins, W. T. — Cotton Plant

YELL COUNTY

Gillum, A. D. — Ola
Grace, J. K. — Belleville
Hester, E. J. — Dardanelle
Linzy, C. B. — Plainview
Millard, Roy I. — Dardanelle
Montgomery, H. L. — Gravelly

Book Reviews

Legal Medicine and Toxicology. By Ralph W. Webster, M. D., Ph.D., late Clinical Professor of Medicine (Medical Jurisprudence) in Rush Medical College, University of Chicago, Chicago, Ill. 862 pages, illustrated. Published by W. B. Saunders Company. Cloth, $8.50.

Dr. Webster says in the preface of this book, that his object is to present the more usual phases of Legal Medicine that the physician may have access to the more important points involved in the cases with which he, ordinarily comes in contact with to inform himself before giving testimony in such cases.

The book is divided into two parts: First, Legal Medicine, and second, Toxicology, which is very ably presented.

Text-Book of Medicine. Edited by Russell L. Cecil, A. B., M. D., Sc.D., Assistant Professor of Clinical Medicine in Cornell University; Assistant Visiting Physician in Bellevue Hospital, New York City. And Associate Editor for Diseases of the Nervous System, Foster Kennedy, M. D., F. R. S. E., Professor of Neurology in Cornell University; Head of Neurological Department, Bellevue Hospital. Second Edition, revised and entirely reset. 1,592 pages. Published by W. B. Saunders Company, Philadelphia. Cloth, $9.00.

The contributors to this volume include one hundred and thirty teachers of medicine and have, therefore, presented their material in a form especially acceptable to the general practitioner and student of medicine.

It is interesting to note the completeness of the work when you observe that it begins with the "Common Cold" and ends on or about the one thousand and five hundredth page on "Mental Disorders."

Selection From the Papers and Speeches of John Chalmers Dacosta, M. D., LL.D., Samuel D. Gross, Professor of Surgery at the Jefferson Medical College, Philadelphia. 440 pages. Published by W. B. Saunders Company, 1931. Cloth, $6.50.

I doubt if there has been a book published that will interest the medical profession more than this particular volume by Dr. John Chalmers DaCosta on "Selections from the Papers and Speeches." It is dedicated to Dr. Harvey Cushing, the distinguished professor of surgery in Harvard University. Twenty-one features are described in over four hundred pages. A very interesting volume.

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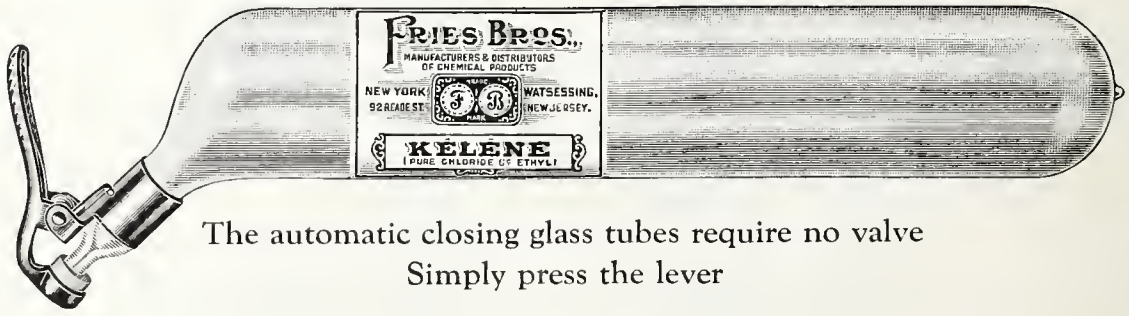

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Original Articles

CHRONIC APPENDICITIS*

(An investigation of the results obtained from 100 cases)

GEORGE V. LEWIS, M. D., Little Rock

I am well aware that many post surgical investigations have been made of the condition known as chronic appendicitis and on a much larger series of patients than is here reported. However, it is well to pause at times and examine our own results and find what mistakes are being made so that they can be corrected. The patients included in this series were all operated on at St. Vincent's Infirmary in Little Rock, an institution that does not have a closed staff. Since nearly all the surgeons in Little Rock are represented by one or more patients, the study of this series will give a true estimation of the average results that are obtained in the diagnosis and treatment of chronic appendicitis.

This series represents those patients who were admitted and diagnosed chronic appendicitis, were operated upon, and were discharged without additional diagnosis. The cases reported in this series were patients during the years 1926, 1927, 1928, and 1929. In that four-year period, there were 14,344 patients admitted; 216 of whom were diagnosed chronic appendicitis, operated upon and discharged with no additional diagnosis. Follow-up questionnaires were mailed to this group until answers from 100 patients were obtained on which this study is based.

In this series, the youngest patient was 7 and the oldest 61 years of age. In regard to decades, 1 patient was in the first, 46 in the second, 29 in the third, 13 in the fourth, 4 in the fifth, 3 in the sixth, and 1 in the seventh. The group consisted of 54 females and 46 males.

Of this series of patients, 34 gave a definite history of one or more previous acute attacks of appendicitis. By an acute attack is meant the manifestation of the following symptoms in this chronological order: epigastric pain, either cramping or dull aching in character, followed in several hours by nausea and sometimes vomiting and a later localization of the pain in the right lower quadrant of the abdomen. Sixty-six of these patients did not give a history that could be interpreted as a previous typical acute attack. Of the symptoms manifested in those patients who had not had a previous acute attack, pain in the right side was constant. This varied in character from a dull ache to quite an intense pain. Six patients complained of pain in both lower quadrants. Backache was an attending symptom in about 20 per cent. Pain in the right lower quadrant was referred to the back and down the thigh in three instances. Constipation also was quite a constant symptom. Approximately half of the patients gave a history of nausea and vomiting. Gas on the stomach was not an infrequent complaint. Nervousness and anorexia were quite often present. In the young females, these various symptoms, particularly pain, were often related to the menstrual cycle. About half the patients complained of an indefinite form of indigestion. Sick headache was occasionally one of the complaints.

With the exception of the abdomen, the physical examinations were essentially negative. Even abdominal physical findings were quite meager. Almost all the patients had a slight tenderness in the right lower quadrant in the region of McBurney's point. This tenderness usually could not be elicited except on deep palpation. Muscle spasm and rigidity were not noted in those patients who did

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

not give the history of previous acute attacks. Other abdominal findings were absent.

Forty-nine of the 100 patients had had a total and differential white blood cell count. Six had white counts of 10,000 or more, the lowest total white count being 3,300 and the highest, 19,000. The lowest percentage of polymorphonuclear cells was 56 per cent, while the highest showed 90 per cent. In only six were there abnormal urinary findings. Five had albumin and three showed considerable pus. One patient had a large amount of sugar in the urine.

As far as could be determined, only six of these patients were subjected to gastro-intestinal x-ray study. Of these, three gave direct x-ray findings of appendiceal disease. No signs of any lesion of the gastro-intestinal tract were found in the other three examinations.

In the follow-up questionnaires returned, 33 of these patients replied that they were not satisfied with the operations and that they still had the same symptoms that were present previous to the operations. Of the 34 patients that had given a history of previous acute attacks, only 5 or 14.7 per cent had not obtained relief. Of the 66 patients who had not given a history of previous acute attacks, 27 or 42.7 per cent still had the same symptoms that had been present preoperatively. Of the remaining patients, who were satisfied with their operation and the results obtained, 5 were constipated, 1 had lumbago, 5 were losing weight, 2 complained of dismenorrhea, and 1 had kidney trouble.

Each of the appendices removed was examined by the hospital pathologist, Dr. M. J. Kilbury, and his report is a part of the patient's record. A study of these records shows that only seven of the appendices removed from patients giving a history of a previous acute attack did not show pathological changes (18.9 per cent). The reports show that no pathological changes were found in the appendices removed from 28 of the patients that did not give a history of an acute appendicitis, an incidence of 43.9 per cent. The remaining reports record grades of pathological changes varying from chronic grade 1 to subacute grade 3. By chronic grade 1, it is meant that the histopathological changes were minimal in extent and that the pathologist gave the operator the benefit of any doubt that might have been present.

From a review of the operative records of these cases, it is apparent that 71 were explored for other abdominal pathology. Twenty-nine patients were operated on through a button-hole incision and there were no records to indicate that there were further abdominal explorations.

There are those, Hertzler, Bevan, Maes, and others, who do not believe that there is any such clinical entity as chronic appendicitis. One medical Parnassus of the Eastern Seaboard says that there are two kinds of appendicitis: acute appendicitis and appendicitis for revenue only. According to Larimore, Koster, and others, to deny the existence of chronic changes in the appendix is to insist that it alone of all the organs of the body may suffer only from acute inflammatory disease.

All surgeons are agreed that surgery is indicated in the interim between attacks of acute appendicitis. According to Deaver, Larimore, and others, even with a definite history of a preceding acute attack, because of the frequency of associated upper abdominal and renal pathology, a thorough exploration of the abdomen should be made at every operation for appendicitis except when an acute inflammation is present.

The symptoms manifested by the so-called chronically inflamed appendix without acute attacks are quite bizarre, the most common being pain in the right lower quadrant with associated indigestion. There is no symptom syndrome indicative of the chronic process in this organ. It has been said that pain and tenderness in the right lower quadrant are more often due to some other condition than chronic appendicitis. The various symptoms that have been attributed to this condition are legion. The physical findings are as equally vague. The x-ray and laboratory are of chief value in detecting other lesions with which chronic appendicitis might be confused. To diagnosticate chronic inflammation of the appendix, one must be prepared to eliminate all the various conditions with which it might be confused or associated rather than depend upon any group of signs or symptoms of its own. Royster says that he knows of no more perplexing diagnosis in the realm of medicine and that it can only be made intelligently and honestly by a process of exclusion: by excluding all conflicting elements and finally by

indicting the appendix from clearest circumstantial evidence.

There is no unanimity of opinion as to what constitutes the pathological picture of chronic appendicitis. Koster sent out questionnaires to leading clinics of this country in regard to their criteria as to the microscopic picture of chronic appendicitis. No two answers were similar and all were contradictory. In the series that I have studied, seven of the appendices from patients who had given a history of a previous acute attack were negative for any histopathological change. It is a well known fact that, where there has occurred only a fixed tissue reaction, complete resolution may take place without leaving any evidence of a former inflammatory process. In contrast to this, those appendices which had not suffered a preceding acute attack gave an incidence of 43.9 per cent without histological change. A great many of the remainder of these so-called chronic appendices revealed only a 1 plus degree of pathology. There are those who believe in the existence of a so-called mechanical appendicitis, the symptoms of which may be attributed to adhesions fixing this structure or angulating it, thereby interfering with its emptying and encouraging the formation of concretions in its lumen.

There is a consensus of opinion (Lichty, Carnett and Boles, Case, and numerous others) that approximately 40 per cent of appendectomies for chronic appendicitis fail to relieve the symptoms of the patient. It was found in this series that 42.4 per cent of these patients were not relieved, a percentage which compares quite favorably with results obtained elsewhere. In contrast, in those patients who gave a history suggestive of a preceding acute attack the results were much better, with a recurrence of symptoms in only 14.7 per cent. The failure to relieve so many patients by appendectomy, as Larimore has pointed out, may be due to associated disease or other abdominal lesions that were in their incipiency and unrecognizable at the time of the operation. It was noted in this series that 71 per cent of these patients were explored without the discovery of associated or other abdominal trouble. In 29 per cent, the button-hole incision was used through which exploration apparently was not performed. Possibly with the exception of those instances in which there has been a most careful roentgen-ray study of the gall bladder and other abdominal viscera, I think it is almost a unanimous opinion that the button-hole incision for such operations is to be condemned. The reasons are quite evident.

A lack of relief of symptoms of 42.4 per cent of patients who have had appendectomies for chronic appendicitis is a serious indictment of the practice of this remedial measure or general scheme of treatment. Even surgery with its brilliant achievements feels the sting of this criticism. The correction lies in the emphasis upon the diagnostic observations of the clinician rather than the restrictions of technical surgery. The diagnosis cannot be accomplished with the simplicity of some "rule of the thumb" procedure which is overshadowed in performance by the operation itself.

I think it might be concluded that the results obtained from surgery for chronic appendicitis are disappointing. I do not wish to be understood as believing that there is no such entity as chronic appendicitis, but I do believe that it is not nearly so frequent as it is thought to be. The diagnosis of this condition should only be made after a thorough examination of the patient, using every effort to exclude the lesions with which it might be confused. Even after such a diagnosis is made, the patient should have a thorough exploration and all associated abdominal disease corrected. Only by such a procedure can patients be assured that they will be more apt to obtain the relief they have the right to expect from a major surgical operation.

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DISCUSSION

DR. W. A. SNODGRASS, Little Rock: I do not like to let a paper of this kind go without some discussion. I believe it a great deal better to take out a hundred of these appendices than to let one acute one get by. We have so many peo-

ple die from acute appendicitis. If we had all these patients under our care to study for several days, it would be a different thing. But there is so much scare about appendicitis. They want the appendix taken out right away. We can't always do just what we think is best. We have to do something to please the patient. But if you get one of these cases with an acute fulminating appendix, and you lose the patient's life, you will wish you had taken it out.

DR. S. F. HOGE, Little Rock: I think that Dr. Lewis has brought to us a very excellent paper and in a very fair and unbiased manner. He has reviewed the subject of appendicitis for the past fourteen years and during that time, as his paper indicates, there has been considerable change in our impressions as to what really constitutes appendiceal pathology. We were taught a rather definite histopathology of the acute appendix. The surgeon, clinician and pathologist differ very little in their findings in these cases. They also had established a fairly definite histopathology for the subsiding acute appendix, and very little argument arose in this diagnosis. But the third type of appendicitis which we were taught to classify as chronic appendicitis has not held the same uniformity of opinion as the acute appendix or the chronic (subacute) appendix. Where the discrepancy crawled in, I don't know. Whether it was due to the surgeon's observations or to the pathological findings, it is difficult to say. They both, however, were not satisfied with the clinical and histopathological picture of the diagnosis of chronic appendicitis, and through this dissatisfaction and from study and research has grown a knowledge which has advanced us considerably in the pathology of the abdomen. It is true, this discussion raised the question as to whether or not the condition should be rightfully called chronic appendicitis or whether it should be called some other pathology, and it probably has both in it.

The paper, too, has emphasized the importance of a very careful study when the clinical and histologic picture is not distinctive. We all know the clinical picture of an acute appendix. I don't think, however, we can say that with the same precision in regards to chronic appendicitis. I am sometimes wondering a little, from the standpoint of internal medicine, if we haven't been inclined to study the right lower quadrant rather to the exclusion of the entire abdomen and that our attention has been focused on the appendix and we have forgotten that the appendix is practically an outgrowth of the tip of the cecum and that the entire lower bowel might be connected in the pathological picture which the patient presents. This has been more than emphasized, as his paper pointed out, in about 42.7 per cent coming back after a number of years with the same complaint they had when they first presented themselves to the surgeon. Out of this has grown a question in internal medicine which we are pleased to call "enterocolitis," and it seems the drift is to a certain extent away from a diagnosis of chronic appendicitis, and to consider the condition enterocolitis rather than chronic appendicitis.

DR. LEWIS, in closing: I wish to thank you for this discussion. There are times when these appendices do not show fever and they may not reach the final stage of localization in the lower right quadrant. We have all seen such a clinical picture, with pain in the epigastrium, maybe with nausea and vomiting, but never localization. I will admit it is very difficult at times to be certain about an attack of appendicitis unless we get the symptoms as mentioned by Murphy. At least, there are many appendices that have acute attacks during childhood and adolescence that are overlooked, commonly called cholera morbus, acute indigestion, etc., that really were appendicitis.

The point I wish to stress is that we are too careless. We don't give enough preoperative study of these patients. A laparotomy is a rather serious procedure. One hospital in Michigan reports as much as a three per cent mortality. Before we enter the abdomen, we want to have some idea that we have at least exhausted all possibility as to whether or not this procedure is indicated.

Another point I wish to stress is that the button-hole incision is to be condemned in chronic appendicitis unless you have very positive X-ray evidence that the appendix is diseased and the rest of the abdomen is negative. I believe if you operate for chronic appendicitis, it should not be done through a button-hole incision; it should be done through a generous incision, where the entire abdominal cavity can be explored.

OCULOGLANDULAR TULAREMIA*

EVERETT C. MOULTON, M. D., Fort Smith

Tularemia has ceased to be a curiosity; in fact, it has become fairly common, and during the past five years, has received much attention by medical writers. Its occurrence as an ocular disease, however, is still sufficiently novel, that liberty is taken to present this case. Literature reveals only 36 undoubted cases, and of these, only one writer (1) speaks of corneal involvement, which was one of the features of the case here recorded.

HISTORY

To Ophthalmology, is entirely due the credit for the discovery of the human type of tularemia. Bubonic Plague first appeared as an epidemic in the United States, at San Francisco, in 1900. In the next four years, one hundred and thirteen deaths occurred there alone. In 1904, a few rural cases began to be reported. This accentuated the published suspicions of Surgeon Rupert Blue (2) of the year before, namely; that bubonic plague and the plague that was destroying the ground squirrels, was one and the same disease. One rural case was investigated by Surgeon Blue, and it was found that direct contact existed with ground squirrels. Experimental work demonstrated the ground squirrel to be very susceptible to bubonic plague. But from some of the sick squirrels brought to George W.

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McCoy at the U. S. Public Health Service Laboratory, it was however, not possible to isolate the *Bacillus Pestis.*

Finally, in 1911, McCoy and Chapin (3) isolated and named the *Bacillus tularense,* by chancing to inoculate egg yolk medium culture tubes which were remnants from other work. Even yet, the organism was not known to be pathogenic for man. In 1913, Dr. D. T. Vail, Sr., a prominent ophthalmologist of Cincinnati, examined a patient suffering with a severe and unusual form of conjunctivitis. He solicited the aid of the department of bacteriology of the University of Cincinnati, and Dr. Wherry and Lamb (4) in collaboration with Dr. Vail, succeeded in isolating *Bacillus tularense* in pure culture, from this case of conjunctivitis, thus establishing the first case on record, of proven tularemia in man. Thus did ophthalmology enter the field of discovery of diseases affecting the human body.

Bacteriology

Bacterium tularense is a pleomorphic organism, gram negative, non-motile, and non spore bearing. It grows readily on egg yolk medium, but not on the usual laboratory media. It stains with gentian violet. Freezing does not readily destroy this organism, as frozen rabbits are infectious for three weeks, but inocuous after four (6). The organism resists drying, many days. Specific agglutins do not develop until the second week, with a sharp rise in the titer during the third week.

Transmission is by blood-sucking insects as well as by the bite of an infected rodent. The organism is pathogenic to man, monkey, ground squirrel, rabbit, guinea pig, mice, gophers, and chipmunks. Recently, tree squirrels have been added. The horse, dog, hog, cattle and chickens are not susceptible, and the rat only slightly so. The organism cannot be grown direct from conjunctival scrapings, but must first be inoculated into a guinea pig. The animal will die in from five to seven days. Autopsy shows characteristic multiple miliary yellow necrotic spots throughout the spleen and liver. Cultures from these foci are readily grown on egg yolk media. A point of extreme ophthalmological interest, is that the ocular form of the disease can be contracted by simply dropping the infectious material into the conjunctival sac, as is readily demonstrable in the laboratory, with experimental animals. Through the epidermis, a scratch, as portal of entry, must exist for the infectious material.

Mode of Infection

Of the proven cases of tularemia conjunctivitis, 23 were due to handling rabbits; eight, to crushing a tick; one, to crushing a fly; one, to the bite of an infected woodchuck, and in three cases, no history of infection can be elicited (6).

There seems to be no respect for age in the incidence, as cases are reported from seven to seventy-two years of age. Males involved, predominate, because of the greater hazards of their duties. Fully 75 per cent of cases occur among farmers.

Diagnosis

Parinaud's syndrome is a condition familiar to ophthalmologists, and as first described by Parinaud (7), consists of an intense nodular conjunctivitis, with swollen lids, only moderate mucoid secretion, and swelling of the parotid region on the affected side. Fever and chills which are moderate, accompany the malady.

Such a picture as this, may be due to any one of several etiological factors. Though the keen clinical observer will differentiate some of them, the laboratory, alone, can, and will positively decide the case. That work should consist of smears and cultures; conjunctival scrapings injected into a guinea pig; serological tests of the patient's blood (Wassermann and agglutination); differential blood count, and in some instances, excision of a conjunctival lesion for staining and microscopical study.

Tularemia of the conjunctiva may be confused with the following clinically confusing conditions:

1. Leptothrix (8) conjunctivitis, which is probably the form originally described by Parinaud. This condition seems to be the only one with eosinophilia (9).

2. Tuberculosis of the conjunctiva, which is usually more gradual in onset.

3. Syphilis of the conjunctiva.

4. Necrotic Infectious Conjunctivitis, as described by Professor Pascheff of Sofia, in 1914. His description of this disease is almost identical with tularemia conjunctivitis, even to a description of the causative organism. Professor Pascheff contends that it is

a specific entity, though his patients have not had the agglutination tests with *Bacillus tularense* (6). H. H. Stark (10) of El Paso, Texas, is the only other writer known to me, who has written of this condition. He made no laboratory studies, other than smears and cultures, in his four cases, which makes them probable cases of tularemia.

5. Conjunctivitis Pseudotubercle Rodentium, described in 1919 by Bayer and von Harrenschwand. This organism closely resembles *Bacillus tularense*.

6. Sporotrichosis. This organism grows on the usual laboratory media.

7. Agricultural Conjunctivitis, described by Patton and Gifford (11) in 1921, has more or less extensive skin lesions and a dense and decidedly adherent false membrane on the conjunctiva. Tularemia does not have this membrane.

8. Streptothrix is culturally characteristic.

9. Acute Trachoma might simulate tularemia.

10. Rat-bite Fever (12) may be confused with oculoglandular tularemia, but the prolonged period of incubation, and measles-like rash, quickly distinguish it.

Case Report

June 6, 1930, J. P. C.; male, aged 74, living in a rural community near Magazine, Arkansas, was sent to my father, Dr. H. Moulton, of Fort Smith, by Dr. Guise, because of a severe conjunctivitis, great swelling of the lids, some pain and fever, and swelling of the preauricular gland of the corresponding side.

Occupation: Farmer.

Family and personal history: Of no significance.

Present illness: Two weeks ago, noticed a red spot on upper right eye lid, followed in two or three days, by swelling of both lids, which became rapidly worse. The next day, a tender swelling in front of the right ear was noticed. Has been sick, with moderate fever, the past week. Much secretion sticks the lids together.

Status Praesens:

External Inspection: Left eye, normal.

Right Eye: Marked redness and swelling of each eye lid, with intense chemosis and a muco purulent discharge, presenting a picture at once suggestive of gonorrhoeal ophthalmia. The preauricular gland of same side is swollen and tender to the touch. On the upper palpebral conjunctiva, are several large, necrotic ulcers of varying sizes which are sharp-edged, rather deep, appearing to reach the tarsus, but filled with a greyish exudative plug. Their size varies from 3 to 8 millimeters. On the temporal bulbar conjunctiva, is a similar, large, punched out ulcer. At the nasal limbus, at four o'clock position, is still another ulcer of punched out type, which involves the cornea in its extent, with perforation of same, and incarceration of prolapsed iris within it, which is covered with a greyish white exudate. The base of the iris, only, is involved, the pupil being round and only slightly eccentric. The anterior chamber is shallow, but formed, and the tension is minus. The cornea is clear, excepting immediately around the ulcer at limbus. A striking feature of the case is the very little redness of the bulbar conjunctiva. During the three days he was under observation, his temperature varied from the normal line up to 100 degrees F. The urinalysis was entirely normal.

Blood Examination: Erythrocytes per c. m. m., 3,740,000; leucocytes per c. m. m., 16,000; small lymphocytes, 36 per cent; large lymphocytes, 10 per cent; transitional, 3 per cent; polynuclear—neutrophilies, 51 per cent; eosinophiles, none.

An immediate search for the gonococcus was negative. Cultures made on nutrient agar and blood serum, after forty-eight hours, showed only a few colonies of staphylococcus albus. Having just recently read the very thorough and comprehensive article by Dr. D. T. Vail, Jr., in the October, 1929, Archives of Ophthalmology, on *Oculoglandular Form of Tularemia*, I was further prompted, in viewing the case with my father, to make full use of the laboratory, in running down the etiological factor.

A guinea pig was inoculated in the groin with scrapings from one of the palpebral ulcers. Five days later, it died. Autopsy showed acute pneumonia, the spleen and liver, greatly swollen and showered throughout by minute yellowish necrotic foci.

A second guinea pig was inoculated, by transferring to the conjunctival sac, by means of a platinum loop, a droplet from the infected spleen of the first guinea pig, care being taken, to create no traumatism to the eye. Four days later, guinea pig No. 2, be-

ing in a dying condition, was chloroformed. Postmortem showed acute pneumonia, and spleen and liver as described in guinea pig No. 1.

The palpebral conjunctiva of inoculated eye was covered with ulcers, while the other eye was normal.

Cultures were made on inspissated egg yolk media, from spleen of guinea pig No. 2. Three days later, smears from growth obtained, showed, from a single colony, both coccoid and rod forms, *i. e.*, a pleomorphic organism which was taken to be the *Bacillus tularense.*

Guinea pig No. 3 was inoculated with organisms from the culture above obtained on egg yolk media, using the same colony that was viewed microscopically. The animal died five days later. Autopsy showed acute pneumonia, enormously enlarged spleen and liver, showered by minute yellowish foci of necrosis.

At this point, laboratory work on this case was discontinued, because of the extreme susceptibility of laboratory workers to tularemia.

Blood from the patient was negative for syphilis, but a specimen sent to Dr. Edward Francis, the Hygienic Laboratory, Washington, D. C., for agglutination tests for tularemia, was reported positive by him, in a 1 to 40 dilution. This specimen was taken before the fourteenth day of illness, which explains why the titer was not higher. The patient could be kept under observation for only three days, and because of the inaccessability of his home, was not seen again. However, friends of his, reported his cure after several weeks, and his physician, Dr. Guise, reported on September 16, 1930, that "the eye improved slowly, without extension of ulcers and in 4 to 5 weeks, was well, with good vision."

Treatment

This case had little treatment, since the condition is a self limited affair. Cleanliness is the first principle to be considered. This is assured by frequently flushing away the secretions with lavage of the conjunctival sac, with a mild antiseptic solution, boric acid, being unequaled for this purpose. Some of the mild colloidal silver solutions may be useful. This case received 20 per cent neo-silvol every two hours. Cold (ice) applications were applied the first few hours to reduce the lid swelling, followed by hot applications of sodium chloride in physiologic solution.

There are four clinical types of tularemia in man, as classified by Dr. Francis:

1. Typhoidal.
2. Glandular.
3. Ulceroglandular.
4. Oculoglandular.

The last type is the one that has been considered here. There is no specific treatment for any of the types. A vaccine has been developed, but apparently without any therapeutic value, though it may prove to be of diagnostic aid. If available, convalescent serum would offer the most promising source of scientific treatment. Suppurating glands should be incised.

Summary

The source of this patient's infection was never determined, but with the characteristic clinical picture of Parinaud's syndrome, the recovery and culture of a pleomorphic organism from the conjunctivata, which in turn produced the classical disease in a guinea pig, and the positive agglutination of *Bacillus tularense* by the patient's blood, this adds another proven case of oculoglandular tularemia, to the small list recorded.

I wish to express my thanks to Miss Tommy Owens, of Sparks Memorial Hospital, for her willing aid and help in carrying out the laboratory work involved in establishing the etiological factor in this case.

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DISCUSSION

DR. T. E. FULLER, Texarkana: We are grateful to Dr. Moulton for bringing this subject to our attention, because I feel that perhaps this disease is more frequent than the reported cases would indicate. Those of us who practice in the smaller communities, in agricultural districts, see them first. I am sure you were impressed as I was by the fact that the infection enters the conjunctiva without any abrasion or scratch. I think, if we will keep this condition in mind when we are confronted by a case that presents features of Parinaud's syndrome, and make the laboratory tests which the essayist has enumerated, we will be able to differentiate these and put them in their proper classification.

My excuse in getting up to discuss this paper is that some years ago I reported a case of Parinaud's conjunctivitis. That was before I was familiar with the work done by Vail and Francis. I know now it was a case of tularemia. In fact, it was so typical it has been included by Vail in his list of cases.

A young man, who two or three weeks before he was seen, had crushed what is commonly known as a dog tick between his fingers, the contents of the tick's body went in his right eye. Almost immediately a severe inflammation set up, followed by swelling of the parotid and cervical glands. The temperature went to 104½. He was quite sick for several days. His systemic reaction gradually subsided, but the eye condition did not, and when we saw him he had just such a picture as has been described by the essayist, except that there was no corneal involvement. His palpebral conjunctiva was covered by ulcers. We had no laboratory work done, except the ordinary smears which showed nothing of importance. He was put in the hospital and the ordinary treatment given him, and he recovered rather promptly.

I wish again to congratulate Dr. Moulton for the very painstaking and thorough way in which he worked out this case.

DR. KILBURY, Little Rock: The point regarding the susceptibility of the conjunctiva or the case with which it may be inoculated with Bacillus tularense is interesting. It is possible that the laboratory workers may be infected through the eye. I have autopsied a great number of guinea pigs for tularemia. I think we studied twenty pigs in connection with Dr. Fulmer's case. The handling of infected guinea pigs is rather dangerous work. We recently had a letter from one of the former professors of bacteriology at the University of Arkansas, who stated that they had buried that day one of their laboratory associates who had died with tularemia.

Dr. Moulton's paper was very interesting and was admirably presented; I enjoyed it very much.

VARICOSE VEINS AND INJECTION TREATMENT*

ALPHONSO ISOM, M. D., Dumas

Varicose veins are unnatural, irregular and dilated veins pursuing a torturous course. This condition is more common than one would expect. It occurs in 20 per cent of adults in some degree in one region or another of the body.

In 75 per cent of the cases it begins before the age of twenty years. The cause is said to be obstruction to venous return or weakening of cardiac action, which lessens the propulsion of the blood stream. The real cause is stated as a predisposition to the growth of vein tissue, which leads to valve failure, with the result of regurgitation of the blood from the deeper veins into the superficial ones.

Varicose veins are seen in most any part of the body, but most frequently on the inner side of the lower extremities, spermatic cord and rectum, and is most commonly met with during and after pregnancy and in persons who stand on their feet for a long period of time. This condition is especially common in the long saphenous vein, which being subcutaneous has no muscular support. The deeper as well as superficial veins may be varicosed.

In selecting cases for this method of treatment, the same care should be exercised as when the condition is to be treated surgically; namely, whether or not the deep venous circulation of the extremity is patent should be determined. For this determination the Trendelenburg test may be employed. The patient is placed in a recumbent position, and the extremity is elevated to empty the veins as nearly as possible. Pressure is then made on the first portion of the saphenous vein, and the patient stands. If the superficial veins fill immediately it is at least presumptive evidence that the deep veins are not functioning. Perhaps a surer method is to have the patient wear a tight bandage for a few hours, compressing the superficial venous circulation. If this causes great discomfort the superficial veins have probably enlarged to compensate for the loss of deeper channels which have become thrombosed. In this case, the superficial veins should not be disturbed.

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Treatment

There have been several operations devised for this condition. Namely, ligation with excision of part of the vein, exposure and ligation of the vein below the saphenous opening, a circular incision around the leg with tying both ends of the vein, but all of these have fallen far short of an ideal procedure in the hands of many outstanding surgeons who have spoken disappointingly of these methods. So, as usual, when methods are unsatisfactory, some ingenious surgical mind comes forth with new methods, and as a result, the injection method is being used quite frequently just now. The ligation method as well as the dissecting method has been so unsatisfactory, or else my technic has been poor and has yielded poor results, naturally seeking something better, I tried the injection method, hoping to improve my end results and speaking from my experience of eleven cases using the injected method, the results have been very satisfactory, all having gotten complete relief from symptoms with practically none or little discomfort from the treatment. Without any loss of time from duty during the days of treatment. This is a very strong talking point in favor of the injection treatment, for if you can promise the laboring man or woman with some degree of certainty that they may continue their daily vocation it will help you materially to sell them with the procedure. There are a few contra-indications to the use of this method of using Sclerosing solutions, yet they are rare in the usual run of cases seeking treatment. The contra-indications are seven in number, namely: Pregnancy, especially in using the quinine solution; (2) old standing or recurrent phlebitis in the deeper veins; (3) diseases of the heart with signs of decompensation; (4) old persons in feeble health; (5) extreme edema of the lower limbs; (6) recurrent attacks of phlebitis; (7) diabetes and kidney disease with high blood pressure. There are now being used several drugs in solution as sclerosing agents, namely: quinine hydrochloride with urethan, sodium chloride, invert sugar, sodium salicylate and iodide of mercury. The only two which I have had experience with to this time has been quinine hydrochloride with urethan and sodium salicylate, 30 and 40 per cent solutions in normal saline.

Technic of Injection

The skin is prepared by painting with a two per cent solution of iodine. The excess is wiped off with alcohol. In pursuing your technic of injection let me strongly emphasize the point of being certain that you have entered the vein with your needle before making any effort at placing the solution into the vein, also, be very careful to let the needle remain in the vein a short period of time, at least two minutes after making your injection. Be sure also that pressure is made over the site of the injection for some minutes after removing the needle from the vein, thus insuring that there has been no escape of the solution into the soft tissues, while the quinine and urethan solution is not painful yet the sodium salicylate is very painful and should the solution escape into the surrounding tissue you would invariably get an acute inflammatory condition and most likely a slough. McPheeters and Rice have probably done as much or more of this work than anyone else. They list the drugs used in every day work as follows: Quinine and urethan, sodium chloride, invert sugar, sodium salicylate. These solutions have their effect by irritating the vein wall causing an obliteration by inflammation and finally by sclerosis. The technic which I have followed in my work has been as follows: First, begin at the lowest point; second, use a small sharp needle; third, be sure the needle is in the vein; fourth, inject towards the trunk; fifth, have patient lie down as soon as you are sure the needle is in the vein, for there is more or less aching when the solution enters the vein, therefore, it is hard for the majority of patients to remain quiet in the standing position; sixth, stop the injection immediately as soon as any stinging or burning is experienced, or if you notice any swelling, over the vein being injected, because, in my experience, I have noticed if you persist in injecting the fluid after you have noticed these warnings invariably you will have enough back pressure to force the solution into the subcutaneous tissues.

When the injection has been completed a pad of wool should be held over the site during withdrawal of the needle to prevent the leakage of blood. The limb is then raised, the site of injection is wiped dry with spirit on a small piece of cotton-wool, and either ordinary plaster or "elastoplast" is fixed to the spot. There may be a certain amount of pain

or cramp persisting for a few minutes, but as a general rule patients can walk away immediately after the treatment.

"Immediate local effects" are as follows: (1) the vein may collapse or dilate after injection; (2) the vein may become hard at once; (3) there may be severe pain at the time of injection; (4) there may be external hemorrhage or subcutaneous bruising; (5) there may be no change; (6) thrombosis may occur and a satisfactory result ensue. Thrombosis usually takes place in from six to twenty-four hours.

"Immediate general effects"—Shock may occur, also collapse and fainting. In cases of quinine injection there may be buzzing of the ears, headache, etc.

"Late local effects"—Consist principally of ecchymosis and gangrene of the vein, and ulcer; of these, the most common by far is the injection ulcer, which is due in most cases to the deposition of the solution in the tissues around the vein. It is serious and painful, and four to six months elapse before a cure is effected. No case of injection ulcer should ever occur. It is, in all cases, due to carelessness in the administration of the injection. In most cases the operator has entered the vein successfully, but in the course of injection, through a momentary unsteadiness or movement of the patient, the vein has been penetrated and the solution deposited in the surrounding tissues. This should never happen if the precaution of withdrawing the plunger of the syringe has been observed. The last late local effect is the complete thrombosis and gradual elimination of the vein. This takes some three to twelve months to occur, the vein gradually becoming hard and cord-like to the touch. Over the bony surfaces the process is slow, but in the thigh it is much quicker, and, as a general rule, it may be stated that the vein should be practically obliterated in twelve months' time.

There is only one important late general effect—pulmonary embolism. Fortunately this is a very rare occurrence.

Of the various substances used by me, quinine hydrochloride and urethan seem to be the solutions of choice except for use in cases of very large veins. In these cases we have used a twin injection of lithium salicylate and quinine and urethan injected simultaneously, but using different syringes for the two solutions.

After the treatment, a small bandage is placed over the site of the injection, and the patient is allowed to continue his duties. These injections are given three times a week. Twenty-four hours following the injection, a definite thrombosis of the vein can be palpated easily. The number of injections required in a given case naturally depends on the extensiveness of the condition and whether or not both extremities are involved. Phenomena suggesting the presence of emboli have not been present in this series.

I am thoroughly convinced from the eleven cases I have used this method in dealing with varicose veins that this method now must be regarded as a surgical procedure in those cases showing no contraindications. This method in my treatment of eleven cases has not required the hospitalization of any patient while some have been more or less uncomfortable, yet not usually painful, so I am convinced that if you will follow the technic carefully outlined above that whatever pain and discomfort you do experience, in most cases, I believe can be attributed to injecting too large a quantity of the solution, or injecting the solution too rapidly. It has not been the intention of the writer to bring to your attention anything particularly new, but only to call to your attention a surgical procedure of much merit, which I believe is not being used as often as indicated.

Newly elected officers of the Southern Medical Association for the coming year are: President, Dr. L. J. Moorman, of Oklahoma City, Oklahoma; First Vice-President, Dr. Frederick L. Fenno, of New Orleans, Louisiana; Second Vice-President, Dr. Charles Hartwell Cocke, of Asheville, North Carolina; Secretary-Manager (for a term of five years), Mr. C. P. Loranz of Birmingham, Alabama; Editor of Journal (for a term of three years), Dr. M. Y. Dabney of Birmingham, Alabama; Assistant Editor of Journal (for a term of three years), Mrs. Eugenia B. Dabney of Birmingham, Alabama; Chairman of the Council, Dr. Homer Dupuy of New Orleans, Louisiana; and Chairman of Board of Trustees, Dr. C. C. Bass of New Orleans, Louisiana.

The annual meeting in 1932 will be held in Birmingham, Alabama.

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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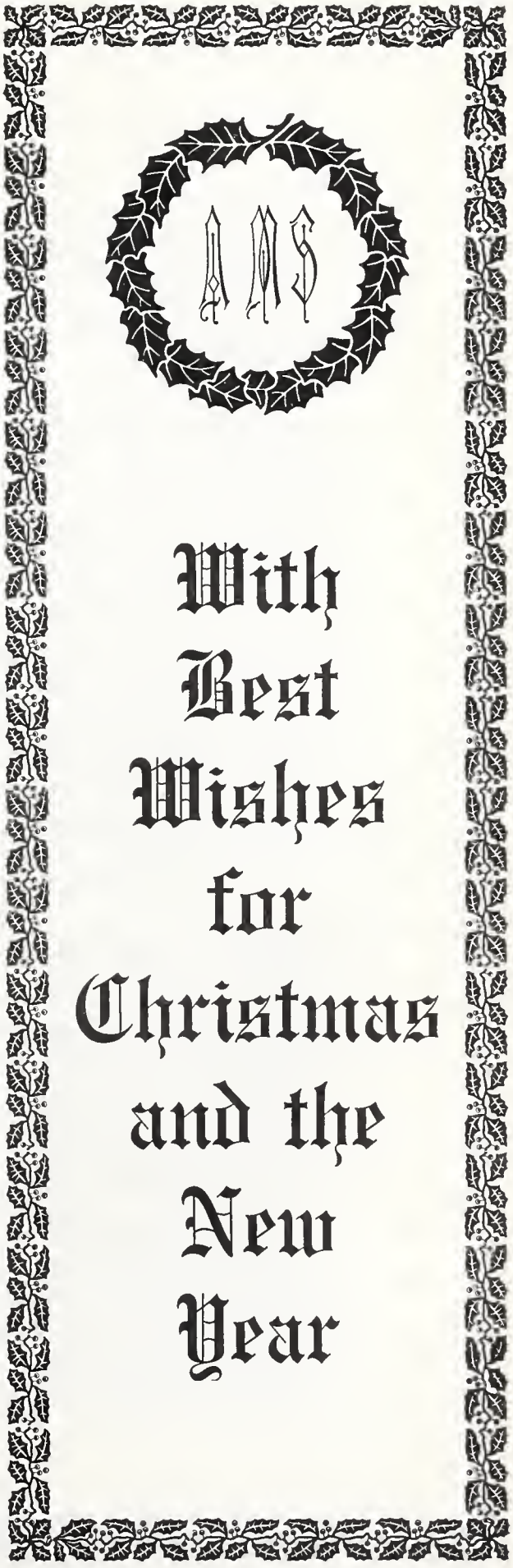

PRESIDEN

The United States Government has inaugurated the policy of providing medical and hospital benefits to all sick and disabled veterans of the World War without regard to the nature or origin of their disabilities. The pursuance of this policy entails the construction of five times as many government hospitals as are now in operation and the expenditure of enormous sums for buildings, equipment and maintenance. It places the Federal Government in unfair and unjust competition with the medical profession and existing civilian hospitals. Since those living in thickly populated centers near the hospitals will benefit more than those living in more remote communities, it provides an unequal distribution of hospital benefits to sick and disabled veterans. It will not provide benefits for all veterans until enough hospitals have been built to supply the need for them. It will build up a bureaucracy with enough influence to perpetuate itself by providing hospitalization for others when the needs for veterans' relief has passed and it will threaten the very existence of the Americal system of medical and civilian hospital practice.

It has been proposed (Shoulders' resolution, Jour. Am. Med. Assn., vol. 96, No. 25, June 20, 1931, p. 2115), that this policy of hospitalization be abandoned and a plan of disability insurance benefits for disabled and sick veterans with non-service connected disabilities be substituted for it. This plan provides for the issuance to every veteran of a disability insurance policy providing for the payment of a weekly cash benefit during a period of total disability and for the payment of an additional benefit to cover hospital expenses during a period of hospitalization.

The advantages of a plan of this kind are manifold. It immediately makes sickness and disability benefits available to all veterans. It provides for an equal distribution of benefits. It provides for a cash payment when disability arises from a cause that does not require hospitalization. The veteran's family will be provided for

MESSAGE

while he is in a hospital. In one day it would have the effect of lifting every indigent and disabled veteran out of the charity wards of American hospitals and relieving welfare committees of local legion posts and other charity organizations of the care of indigent and disabled veterans. It would permit a sick veteran to be cared for by a physician and in a hospital both of his own selection. It would provide for common illnesses like influenza not ordinarily requiring hospitalization. It would provide immediate hospitalization and care in severe injuries and in emergency conditions like acute appendicitis, conditions in which government hospitals will be of little benefit. It will not interfere with the policies of the government for aiding veterans with service connected disabilities. When the last need of the last veteran has been served the benefits will automatically end. Disregarding the enormous cost of building and equipping the necessary hospitals for government hospitalization, actuarial estimates show that the plan of insurance benefits will not be so costly as the maintenance of the hospitals. It will preserve for future generations the Americal system of medical and civilian hospital practice. (Am. Med. Assn. Bull., vol. 26, No. 10, Oct., 1931.)

The duties of Arkansas physicians in connection with this problem are clear. They should familiarize themselves with this subject by studying the articles to which reference has been made and others that will be published. The subject should be discussed at county medical society meetings. Local legion posts should be approached and the veterans themselves convinced of the greater advantages of the insurance plan. They should obtain the approval of the insurance plan by resolutions of the legion posts. They should be prepared when the time arrives, by suitable resolutions and in other ways, to bring this subject to the attention of Arkansas representatives in the Congress of the United States.

D. A. RHINEHART, *President Arkansas Medical Society.*

THE NEW CHRISTMAS SEAL FOR 1931

A special design picturing the holiday festivity of "the good old days" was selected for the Christmas seal of 1931 to commemorate the 25th anniversary of the sale of seals to fight tuberculosis. An old-time stage coach is shown drawn by four horses prancing through the snow. Aloft on the upper deck a passenger blows his horn to blazon Christmas greetings to the countryside.

Twenty-five seals, each with a different design, have been sold to the public at the holiday season since the organized tuberculosis movement got under way. From small beginnings at a time when everybody believed tuberculosis was hereditary and the equivalent of a death sentence, it has carried its message that tuberculosis is preventable and curable to every hamlet and cross-roads in the country, until today few people remain who do not know that rest, fresh air, sunshine and nourishing food are both the preventive and the curative agents for this disease.

During the quarter century of work which the new seal commemorates, the ravages of the disease have been cut in half; more than 500 sanatoria have been constructed; clinics have been established for early diagnosis; the tuberculin test and X-ray have been perfected for the more certain detection of tuberculosis even before it exhibits outward symptoms; and the methods of educating the general public to protect itself against the disease through knowledge, have been raised to a high point of effectiveness.

But a great deal remains to be done. Despite the success of past efforts, tuberculosis is still a greater public enemy than most people realize. It is the leading cause of death between the ages of 15 and 45, and a serious menace to the health of young men and women entering intensive high school and college days.

Money is needed wherever seals are sold to finance the battle against the disease. The payments which tuberculosis exacts from humanity are subject to no moratorium because of dull times. Children must be protected from tuberculosis; new and unknown cases must be found in the early stages; clinics, nurses, summer camps must continue the work which has already proved its worth. Practically all the money raised by the seals remains in the community where it is given, and is used to meet the special needs existing there.

Every dollar given for Christmas seals means life and health to men, women and children threatened with tuberculosis.

Abstract

PRESENT STATUS OF ANESTHESIA PROBLEM

Arthur Dean Bevan, Chicago (Journal A. M. A., November 21, 1931), reviews briefly the subject of anesthesia, tests the various anesthetic agents by the scheme of measurement which his associates and he have devised, and attempts in a judicial way to determine what anesthetics are today the safest, most efficient and most practical for use in a general surgical clinic. He believes that the use of chloroform, of intraspinal anesthesia, of intravenous anesthesia, of intrarectal anesthesia, of intratracheal anesthesia and of so-called basic anesthetics, such as scopolamine, avertin and amytal must be limited to very narrow fields. Fortunately, local anesthesia, gas anesthesia and ether afford three anesthetic measures which, if handled by an expert can be used alone or in sequence, with abolition of pain and, if desired, the abolition of consciousness and, when required, complete relaxation, and can secure complete and safe anestesia for any and all surgical operations. This places anesthesia on a very unpretentious, simple basis, but here, as in all fields of surgery, it finally becomes apparent that simplicity is near truth. The author believes that the general adoption of this simple scheme of anesthesia will prevent many anesthetic accidents and save many lives.

Personal and News Items

Dr. Malvin W. Owens of Bonita, Louisiana, visited in Little Rock last month.

Dr. and Mrs. D. W. Goldstein of Fort Smith visited in Havana, following the meeting of the Southern Medical Association in New Orleans.

The next annual meeting of the Arkansas Medical Society will be held in Little Rock, April 5-6-7. Those desiring to present papers should apply at once to Dr. R. J. Calcote, Chairman, Committee on Program, Donaghey Building, Little Rock.

The Conway County Medical Society held its regular monthly meeting November 19, in Morrilton. The following officers were elected for the ensuing year: President, W. H. Bruce, Morrilton; Vice-President, H. E. Mobley, Morrilton; Secretary-Treasurer, A. L. Goatcher, Plumerville.

Dr. D. A. Rhinehart has appointed the following advisory committee to the auxiliary of the Arkansas Medical Society: Dr. D. W. Goldstein, Chairman, Fort Smith; Dr. Pat Murphey, Little Rock; Dr. Frank B. Kirby, Harrison; Dr. H. A. Stroud, Jonesboro; Dr. H. E. Murry, Texarkana.

We regret to announce the death of Dr. L. A. Buckner of Dermott. Dr. Buchner was a member of the Legislature from 1909 to 1913, and introduced the bill into the lower house, creating the present State Board of Health. In recognition of his efforts along this line, Senator Joe T. Robinson, then governor, appointed him a member of this board.

An illustrated article on the Boys' Camp at Little Rock, written by Dr. Geo. F. Jackson, appears in the November issue of the Kiwanis magazine. Dr. Jackson, who is a past president of the Little Rock Kiwanis Club, has recently been named lieutenant-governor, representing this territory of the Missouri-Kansas-Arkansas district.

A recently completed building project in Arkadelphia is the Townsend sanitarium on Caddo Street between Sixth and Seventh Streets, and a nurses' home adjoining. The sanitarium is modern in every particular, and is practically fire-proof. The outer walls are of dark red brick and the inner walls are of tile. A thick wall separates the building midway, and there is a metal fire-proof door. On the first floor are the physicians' offices and reception rooms. The nurses' home is of red brick veneer and contains two stories.

The American Board of Ophthalmic Examinations will hold an examination in New Orleans on Monday, May 9, 1932, at the time of the meeting of the American Medical Association.

Necessary applications for this examination can be procured from the Secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago, and should be sent to him at least sixty days before the date of the examination.

"Doctors in this section are having a h..... of a time trying to collect enough to pay an installment on our grocery bills and stalling off our banker. Wonder when they are going to extend that moratorium to the medical profession? These folks still want us to ketch babies and charge it. Last one I caught I got $2.50 and a bushel of apples—14 miles up in the mountains. Another man is going to bring me 15 gallons of sorghum to be credited on his last two. We are getting some 'taters—sweet and Irish. How about the State society crediting 'taters and sorghum on annual membership dues?"—*Douglass of Ozark.*

In 1906 the Board of Trustees directed the creation of a chemical laboratory in the headquarters of the American Medical Association. The chief function of the laboratory was and is to aid the Council on Pharmacy and Chemistry in its consideration of proprietary products. In 1906 deceit was rampant; false formulas and improbable chemical statements were not uncommon. Today there is much less of such gross deception. (Jour. A. M. A., November 14, 1931, p. 1470).

Dr. M. J. Kilbury, connected with the pathology department of St. Vincent's Infirmary of Little Rock for several years, December 8th was elected chief of staff to succeed Dr. Robert Caldwell, who had served for five years. Dr. R. J. Calcote was elected secretary-treasurer, succeeding Dr. R. M. Blakely, who had served ten years.

The following department heads were reappointed: Dentistry, Dr. E. Mahoney; dermatology, Dr. W. R. Bathurst; diagnosis, Dr. N. F. Weny; eye, ear, nose and throat, Dr. Paul Mahoney; gynecology, Dr. M. E. McCaskill; medicine, Dr. J. R. Dibrell; metabolism, Dr. S. C. Fulmer; neurology, Dr. Pat Murphey; obstetrics, Dr. S. B. Hinkle; orthopedics, Dr. F. W. Carruthers; pediatrics, Dr. H. W. Browning; proctology, Dr. H. R. Allen; roentgenology, Dr. D. A. Rhinehart; surgery, Dr. Dewell Gann, Jr., and urology, Dr. H. Fay H. Jones.

"DALLAS SOUTHERN CLINICAL SOCIETY NEWS"

Throughout the past several months, the various branches of the Program Committee have been diligently working on the plans and details of the program for the Fourth Annual Spring Conference of the Dallas Southern Clinical Society which meets in Dallas, March 28th to April 2d, 1932, inclusive. A most elaborate program has been planned, and except for a few of the details, the entire program is about ready to go to press. This is the best coordinated, and most thoroughly balanced program that has ever been offered the medical profession of the Southwest. Many elaborate features are planned. Twenty distinguished guest speakers, men of outstanding ability as teachers throughout the United States, have already accepted the invitation to appear in general assemblies, hospital clinics, and the popular round table luncheons. Every field of medicine is thoroughly and adequately covered, and covered in such a coordinated way that the doctor who attends will be able to arrange a course of post-graduate study.

The evening entertainments throughout the Clinical Conference offers many outstanding features. On Monday evening Dr. Edward H. Cary, President of the American Medical Association, will make the Welcome Address before a general assembly which will be open to the public.

The "Prospectus" will be ready for mailing about January 1st, and the complete program will be mailed to all the doctors of the Southwest about March 1, 1932. A cordial invitation is extended to every doctor, and a hearty welcome is awaiting you. If interested, write to G. F. Goff, M. D., Chairman, Publicity Committee, Dallas.

BUY CHRISTMAS SEALS

The Arkansas Tuberculosis Association, which was organized by the Arkansas Medical Society in 1908, is very definitely directing its present program toward case finding and is asking and giving every cooperation to the family physicians in the work.

During the past year through its activities 2,085 patients have been examined in the public clinics. Of this number 888 gave a definite history of contact with the disease. 435 cases were positive, 117 being far advanced.

The Association conducts its clinics only on the invitation of the County Medical Society, which selects the clinician from the volunteer staff of the Association. Every person who presents himself for examination must give the name and address of the family physician and the record of the findings are sent promptly to the doctor. Every positive case and every suspect receives a personal interview with a worker from the Association, in which he is urged to consult his family physician without delay and to abide by the advice of his physician.

At the recent meeting of the Arkansas Medical Society in Texarkana, Dr. J. D. Riley of the State Sanatorium gave the work the strongest endorsement.

The Tuberculosis Christmas Seal Sale is almost the sole source of income for the organization. There has been a flat drop of 199 deaths from the disease between 1926 and 1930, which should encourage all our societies to join actively in the campaign and to see that the seals are sold and used in their respective communities.

The Association stands ready to furnish free material on tuberculosis with simple instructions for care of the patient in the home which the private physician will find eminently useful in his own supervision of cases. The pamphlet on childhood tuberculosis prepared by Dr. Chadwick of the Boston and Detroit clinics for use of the medical profession as well as the Diagnostic Standards set up by the American Medical Association, will be given without cost to any physician upon request.

FORT SMITH CLINICAL SOCIETY MET NOVEMBER 24, 1931

The program sponsored by Sparks Memorial Hospital, with the cooperation of St. Edward's and St. John's Hospitals, was as follows:

Morning Session

Sparks Memorial Hospital

Surgical Clinic—Dr. I. F. Jones.

Surgical Clinic—Dr. W. F. Rose.

"Demonstration of Laboratory Procedures"—Miss Tommie Owens.

"Modern Ideas in the Management of Fractures of Appliances"—Dr. J. A. Foltz.

Noon Session

Luncheon—Goldman Hotel

(Hosts: Drs. S. P. McConnell, Booneville; Earle Hunt, Clarksville; W. P. Scarlett, Russellville; W. L. Shippey, Wister, Okla.)

"The Importance of Early Diagnosis of Heart Lesions"—Dr. H. C. Dorsey.

"Pelvic Inflammatory Disease"—Dr. C. S. Holt.

"Medical Economics"—Dr. C. H. Kennedy.

"Diathermy in General Medicine"—Dr. Vogel Jeffery.

"Acute Respiratory Infections"—Dr. C. S. Means.

"Prostatitis"—Dr. H. H. Smith.

"Hypothyroidism"—Dr. J. S. Southard.

"The Examination and Advice of Patients"—Dr. S. P. Stubbs.

Afternoon Session

Banquet Room—Goldman Hotel

(Dr. W. G. Eberle, Chairman)

"The Liver Function in Relation to Disease"—Major J. M. Troutt, Chief of Surgical Service, Army and Navy General Hospital, Hot Springs.

"Congenital and Acquired Lesions of the Lumbo-Sacral Region"—Dr. W. A. Myers, Myers Clinic, Kansas City, Mo.

AND NO SUGAR NEEDED

During a lecture on foods to an audience of Negro schoolboys the speaker asked: "Can someone tell me a good breakfast food?"

"Yassuh," said a boy in the front row. "Cawnbread an' molasses."—J. O. W.

COUNCIL ITEMS

The Council of the Arkansas Medical Society met at Little Rock, December 8, and among other business transacted the following resolution was adopted:

To the Council of the Arkansas Medical Society:

Gentlemen:

At the Texarkana meeting of the Arkansas Medical Society a subcommittee of the Council was appointed to investigate the activities of the County Health Units of the State Board of Health, including those of the County Health Officers and County Health Nurses, and report back at a subsequent meeting of the council. This investigation has been carried out by means of meetings with the State Health Officer and the State Board of Health, by personal and written communications with physicians of almost all parts of the State, and by means of a questionnaire sent to the president of each county medical society in the State.

During the investigation much objection was found to the activities of the health agencies. The activities objected to may be briefly stated as follows:

1. The free immunization of large numbers of people against typhoid and diphtheria without attempting to differentiate between those able and those unable to pay for such services.

2. The activities of unsupervised County Health Nurses.

3. The practice of curative medicine by full-time salaried health officials.

4. The conducting of tonsil-removing and other clinics without consultation with physicians resident in the locality where the clinics are held.

Of these, the greatest part of the objection was to the immunization program, and a minor part to the actual practice of medicine by health officers and nurses, and the manner in which the clinics were conducted.

In fairness to the health authorities it was found that in certain counties the health work has been approved by the county medical society. The committee is convinced that these counties are in the minority. Unfortunately, the data at hand does not permit of an enumeration of the counties in which the

health work is approved and those in which it is not approved by the county medical society.

The causes for the objections to the health activities may be briefly summarized as follows:

1. Physicians feel that everything pertaining to the health, public or personal, of the community in which they reside and practice should be within the sphere of their activities, and that preventive and curative medicine should not be practiced without their knowledge, cooperation, and consent.

2. Physicians believe that the examination of school children and other persons for physical defects and the administration of immunizing substances are a part of the practice of medicine and should not be done by a nurse or other unlicensed person.

3. Physicians believe that providing medical services of any kind for persons able to pay for such services is an injustice and should not be permitted. This is particularly true during times of economic depression when so much of the time and resources of these same physicians are given to the care of indigent persons from whom no remuneration is expected. Your committee has not encountered a single instance of a physician objecting to immunization because it would prevent disease and thus restrict his practice. To advance such a reason, your committee feels, is absurd.

This committee is convinced that, for the reasons given above, the resentment of physicians to the activities of the health authorities in some of the counties of the State is a real menace to all of the health program. It is further convinced that this resentment is growing rather than subsiding. We feel that more active antagonism to the practices thought to be objectionable has been delayed by the knowledge that this subject has been under consideration. We believe, therefore, that this committee is justified in making recommendations, that these recommendations, after amendment if thought advisable, should be approved by the council, and that they be made the basis for a cooperative health program uniting the county medical societies and the health authorities in the different counties. These are as follows:

Public health programs can be better carried out with the co-operation of the medical profession and the health authorities than with the antagonism or non-support of the physicians. For this reason, we believe that plans should be perfected by the Board of Health whereby the physicians of the different counties may, if they wish, have active participation in any health program that is instituted. We believe that the physicians can be utilized in the examination of school and pre-school children for remedial physical defects. We would recommend that, in those counties where objection has been raised to the wholesale immunizations by health nurses, this work be done by the physicians.

This work must all be done by the physicians or all by the nurse. To expect the nurse to administer the immunizing preparations to those unable to pay and leave for the physicians those that are able to pay is a plan impossible of accomplishment. We think that during the time of an immunizing campaign with the physicians participating definite office hours should be set aside by the physicians for this work, and, for those that are able to pay, an amount less than the usual office fee be charged. The immunizing materials used for charity patients should be supplied by the Board of Health; those used for pay patients should be obtained from the usual commercial sources or through some arrangement with the Board of Health.

2. Your committee would recommend the retention of the health nurses in those communities in which they are already at work and that plans be instituted for securing nurses where there are none now. We believe that the services of the nurses will be invaluable in a cooperating health program. By defining the activities of the nurses so that there will be no conflict with those of the physicians, invaluable aid will be rendered by them. In publicity work, in house visitations, in dietetic management, and in many other ways, the nurses should be used.

3. Your committee would recommend that County Medical Societies actively participate in the management of tonsil-removing and other clinics. We think that there is a demand for such clinics and that they will be held regardless of whether the physicians of the county participate or not. To this end it would be wise for each society to establish general rules providing for such clinics and give publicity to them for the guidance of

Parent-Teacher and other interested organizations. As outlined by its Secretary your committee has not found any defects in the policies of the Board of Health for management of such clinics.

4. Your committee feels that it would be unwise to complete this report without cautioning the members of the different county medical societies that they must abandon their traditional position of isolation and take an active part in preventive medical and other health programs. We believe these activities will be conducted, preferably under the leadership of regularly licensed physicians, but when such leadership is not available without the cooperation of physicians and in spite of their antagonism. Such leadership entails planning, foresight, work, and cooperation to such an extent possibly not heretofore undertaken by the medical profession.

Auxiliary Notes

Mesdames L. J. Kosminsky, R. R. Kirkpatrick, J. T. Robison and N. B. Daniels were hostesses to the Woman's Auxiliaries to Miller-Bowie Counties, November 22. A report of the Woman's Auxiliary to the Southern Medical Association was given. Mrs. George W. Parsons gave the "Story of Anesthesia."

Mrs. J. S. Westerfield was hostess to the Woman's Auxiliary of Faulkner County at the home of her daughter, Mrs. Hilliard, Thursday afternoon, November 19. Mrs. Mason E. Mitchell, who was a missionary in China for a number of years, serving under the auspices of the Methodist Board of Foreign Missions, made an interesting talk on foot-binding, one of the greatest social evils practiced in China.

Mrs. W. T. Wootton was hostess to the Woman's Auxiliary of Garland County, Monday afternoon, November 16, at her Forest Hills home, with Mrs. C. H. Nims presiding. Mrs. D. C. Lee of the public health committee presented a letter from the State chairman, Mrs. H. E. Murry, urging parents to immunize their children from contagious diseases, especially diphtheria. It was decided to address the Parent-Teacher Association on the subject. Mrs. E. L. Thompson reported on tuberculosis findings, and announced the opening date for the Christmas Seal sale, December 5. Mrs. Wootton of the philanthropic committee made a report and Mrs. J. M. Proctor, chairman of entertainment, announced a tea to be given Monday afternoon, November 23, at the home of Mrs. Grayson Tarkington, proceeds to be used for undernourished children of tuberculous contacts. This tea is an annual event and is largely attended, due to its worthy cause. An artists' program will be presented during the tea hours, Mrs. Wootton, assisted by Mesdames G. A. Herbert, J. B. Strachan and G. M. Eckel, served refreshments.

Mrs. Harry A. Jones was heard in two delightful musical numbers during the afternoon.

The November meeting of the Auxiliary to Pulaski County Medical Society was held Wednesday afternoon, November 11, at the home of Mrs. M. B. Holmes, Fort Roots, with Mesdames M. H. Yeaman, A. H. Mountford, W. A. Jolly and J. C. Statham assisting. Mrs. D. A. Rhinehart, president, presided over the business meeting. Reports were—Membership: A contest for new members; early payment of dues, and attendance, each counting a certain number of points. Mrs. E. H. Wilkes and Mrs. J. B. Crawford are the captains. Mrs. A. R. Stover, chairman of Public Relations, gave a detailed report of both State Federation dinner and City Federation meeting. Mrs. M. J. Kilbury, chairman, Entertainment, reported thirty-one attending the opening luncheon held at the Albert Pike Hotel, October 21. Student Loan Committee reported $37.50 made at a benefit bridge party. Mrs. Anderson Watkins reported much work done by the "Kit Workers." Mrs. W. A. Snodgrass, Sr., reminded every one that Monday, November 16, was Pantry Shelf Day. Mesdames M. Y. Marshall and S. C. Fulmer were welcomed as new members. Dr. A. H. Mountford, speaker for the afternoon, gave a most interesting and instructive talk on Occupational Therapy. Mrs. Rhinehart and Mrs. Chas. E. Oates presided over the tea table.

HEIGH! HO!!

Ad in the Milwaukee Medical Times

Young woman with some knowledge of anatomy desires to further medical education by assisting physician two evenings a week—gratis. Call Marquette 4131.

Obituary

PEMBERTON, EDWARD MELTON—Dr. E. M. Pemberton of Little Rock, aged 50, died November 20, 1931. He was born at Charleston, W. Va., received his masters degree at the University of Chicago and his medical degree from the Maryland Medical College, Baltimore. For twenty years, he was professor of physiology of the University of Arkansas, School of Medicine.

Dr. Pemberton is survived by his wife, his mother, Mrs. M. K. Pemberton of Little Rock; and three sisters, Miss Nell Pemberton of New York and Miss Ethel Pemberton and Mrs. J. F. Butts, both of Charleston, W. Va.

ROUTH, CHARLES M.—Dr. C. M. Routh of Harrison, aged 59, died November 27, 1931. He was the son of the late Dr. Hugh L. Routh. Dr. Routh was a graduate of the Arkansas University, School of Medicine, and had practiced medicine in Boone County for twenty-five years.

He is survived by his son, Hugh Routh of Belfry, Mont., and three daughters, Mrs. Ralph Estes of Fayetteville, Mrs. Lucien Dodson of Muskogee, Okla., and Mrs. Helen Cross of Harrison.

RESOLUTIONS IN RESPECT OF THE LATE DR. B. C. LOGAN

To the President and Members of the Conway County Medical Society:

We, your committee appointed to present to this Society a tribute of our love and respect for our deceased member, Dr. Benjamin C. Logan, feel that we, individually and collectively, have sustained a loss which we cannot express in words.

Dr. Logan, whose death occurred October 31, at the age of fifty-six, had been a member of this Society for twenty-nine years, and was on several occasions its president. Throughout his years of practice in Morrilton and Conway County, he was recognized as a skillful physician, a useful citizen and an upright man.

Imbued with a high sense of duty and a conception of service representative of the best ideals and traditions of the Medical Profession, he lived faithfully and consistently toward both. His life was an unusual example of the subordination of self to the service of humanity.

We offer our heart-felt sympathy to his widow, mother and brother. To each other and to our profession we pledge ourselves anew to our ideals as exemplified in the life of Dr. Logan.

It is as if we had just heard him say in that quiet, kindly voice, "Well, I have a call to make. I'll see you again."

T. W. Hardison,
A. L. Goatcher,
H. E. Mobley,
Committee.

Morrilton, November 10, 1931.

County Societies

DREW COUNTY

(Reported by A. S. J. Collins, Sec.)

The Drew County Medical Society held its regular monthly meeting and elected officers for the ensuing year, which are as follows: President, M. Y. Pope, Monticello; Vice-President, S. M. Gates, Monticello; Secretary-Treasurer, A. S. J. Collins, Monticello.

The following resolution was adopted:

We, the members of the Drew County Medical Society, wish to call your attention to a condition which exists in our county, and which we regard as a violation of the regulations, governing the function of our county health unit; in which said health unit is doing general medical practice, in competition with the individual doctor for individuals who are amply able to employ, and pay their doctors.

Examples of this practice are seen in venereal diseases, which we know to have been treated by the health unit, in persons amply able to pay for same.

Also, we know of other cases of individual illness, occurring in families who are amply able to pay their doctors, and who have been treated free by the health unit, both in its office and at the patient's home.

Since it is our understanding, that the function of the health unit is disease prevention, by education and such other means as may be necessary to disease prevention; and that their only legitimate field of treatment is in those indigent individuals, known as paupers or public wards, and that the decision as to the status of such public wards, is that of the county court; we therefore feel that the present activities of the Drew County Health Unit, in doing routine treatment of persons amply able to employ physicians and pay them, is a violation of their duties, and an encroachment on the rights of the doctors in private practice.

Also, we would call your attention to the fact that these same private physicians, help with their taxes to support the health unit and that the members of the Drew County Medical Society have and will help take care of any and all charity cases who may be in real need of their services.

Also, it is a known fact that the doctors of Arkansas have never been known to fail to give their best services in all instances of flood, famine, or other calamity, which have ever overtaken our people, and at this time the doctors of Drew County are caring for far more people on a purely charity basis, than any other kind, and are doing it freely and cheerfully where a visible need exists; we therefore petition you to protect the private physician, from the encroachment of this type of State medicine, by using whatever means may be available, to restrict our county health units to their proper sphere of activities; which we understand to be disease prevention, and the care of paupers, and prevent them from doing general practice for individuals amply able to pay for same.

M. Y. Pope, President,
A. S. J. Collins, Sec'y.,
Drew County Medical Society.

GREENE COUNTY

(Reported by W. M. Majors, Sec.)

The Greene County Medical Society met November 5, 1931, in the office of the secretary, Dr. Majors. The meeting was convened at 7:30 p. m. by the president, Dr. F. M. Scott. Minutes of the last meeting were read and adopted.

Present: Scott, Dillman, Hudgins, Futrell, Robert Haley, Sr., Lamb, Cupp and Majors. Visitors: Drs. Thad Cothern, Jonesboro, and J. H. McCurry, Cash.

Scientific program:

"The Treatment of Pneumonia," by R. W. Cupp, Beech Grove.

"Salpingitis," by Jas. A. Dillman, Paragould.

At the conclusion of the scientific program, the question of the activities of the Greene County health nurse arose, and after a very heated discussion of the subject a resolution was adopted strongly condemning such activities as is the practice of said nurse, and the members of the Greene County Medical Society would appreciate very much her withdrawal from the county, or her activities as heretofore practiced be discontinued.

It was also agreed that the members of the society will, in the future, refrain from assisting anyone in any way in the conducting of free clinics, except to the needy and worthy poor.

The society is of the opinion that the many problems pertaining to public health matters can be more intelligently handled by the physician who has had many years of experience and training in that particular line of endeavor than the so-called county health nurse whose course of training is comparatively short and very superficial.

The society also fails to realize the necessity of such nurse or agent, and sincerely desires to go on record with all their strength in condemning such activities as is being carried out by the so-called county health nurse.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in Blytheville, November 10, 1931. The president being absent, Dr. Johnson presided.

Present: Saliba, Tidwell, Washburn, Wilson, Johnson and Smith all of Blytheville; A. C. Lewis and Henry G. Hill of Memphis.

Dr. Lewis discussed "Sinus Trouble" and Dr. Hill, the "Management of Fractures." Both subjects were ably presented.

County Societies

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society held its regular monthly meeting at Blytheville, December 8, 1931. Dr. Ellis presided in the absence of the president, Dr. Paul L. Tipton. Present: Saliba, Sheddan, Washburn, Ellis, Tidwell, I. R. Johnson, Grimmett and Smith.

The following officers were elected for 1932: President, W. J. Sheddan, Osceola; Vice-President, I. R. Johnson, Blytheville; Secretary-Treasurer, F. D. Smith, Blytheville (re-elected); Censor, N. B. Ellis, Wilson.

The next meeting will be held at Osceola the second Tuesday in January.

Book Reviews

Handbook of Anatomy, Being a Complete Compend of Anatomy. By James K. Young, M. D., F. A. C. S., Late Professor of Orthopedics, Graduate School of Medicine, University of Pennsylvania. Revised by George W. Miller, M. D., F. A. C. S., Associate in Anatomy, Jefferson Medical College; Surgeon to Montgomery Hospital, Norristown, Pennsylvania. Seventh Revised Edition, with 154 engravings, some in colors. Published by F. A. Davis Company, Philadelphia. Price, $3.75.

The demand for a seventh revision is a tribute to the author. His endeavor has been to carry out the original purpose—to lighten the labor of the student of medicine.

Dr. Young subdivides human anatomy into general, descriptive, and surgical. General anatomy treats of the minute structure of the organs of the body. Descriptive anatomy treats of the various properties of the organs, and surgical anatomy treats of the relative position of organ to one another and to the surroundings parts in special regions of the body, as the axilla, neck, or groin.

DUCTLESS GLANDS AS THEY APPERTAIN TO EYE DISEASES AND TO SURGERY

As conclusions to his article, A. D. Ruedemann, Cleveland (Journal A. M. A., December 5, 1931), enumerates the following noteworthy facts: 1. Frequently it is found that patients who are examined for glasses have a muscle imbalance which may be due to hypothyroidism or other glandular dysfunction. 2. Hyperthyroidism produces definite eye changes, which in most cases are benefited by surgery; namely, wide fissures, ulcers and exophthalmos. Associated muscle changes are little benefited by any treatment, medical or surgical. 3. In parathyroid tetany, lens changes are sometimes present, probably the result of a combination of spasm with a deficiency of calcium and phosphorus. 4. Dysfunction of the pituitary gland is a causative factor in certain retinal disturbances and is an associated factor in other eye changes probably of polyglandular origin. 5. The recent work of Dr. Crile also brings out a group of cases in which suprarenal dysfunction is associated with eye changes.

FOR SALE—Complete office equipment of the late Dr. H. H. Smith, including fifty medical books, more than a hundred practically new instruments, three white enameled cabinets, operating table, stool, chair, all in white enamel, sterilizer, electrical apparatus, several hundred dollars worth of medicines. A bargain. For further information, address Mrs. H. H. Smith, Calico Rock, Arkansas.—Adv.

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Original Articles

SCHILLING'S DIFFERENTIAL COUNT*

M. J. KILBURY, M. D., Little Rock

The differential count is used more than any other laboratory proeedure with the possible exeeption of the urinalysis. It is a routine proeedure in most of our offiee and hospital laboratories. Blood pictures have not been used to the best advantage. Most doctors try to make the blood count fit in with the elinical picture of the patient; if it does well and good, if not the count is discarded. This should not be done. Every blood picture has a meaning and when properly interpreted will give valuable information regarding the patient's condition. If one expects a total white count of 15,000 and a count of 6,000 is returned, there is a reason for it. The patient's resistance should be evaluated on the basis of the count.

The eorrect interpretation of blood pictures requires considerable knowledge of medicine and a thorough knowledge of hematology. The technician can make a satisfactory blood count but the interpretation should be by one who has had vast experience both in the clinical and laboratory fields.

Most workers have eonsidered the differential count as finished a product as the multiplieation table in arithmetic. It has therefore not been materially changed since its introduetion. Recently the writings of Schilling, a German hematologist and clinician, have been translated into English; as a result a new impetus has been given to the differential eount. Many of our hospitals and office laboratories have adopted the Schilling's differential eount in place of the old conventional count.

The principle underlying the new differential eount is as follows: As one studies the polynuclear cells in the blood, many different forms as to the arrangement of the nuclei are found. There are the very young mononuclear cells, the myelocytes, and the adult multi-nuelear cells with many graduations between the two types. Under normal eonditions the blood cell factory, the bone marrow, operates smoothly and no young nor immature eells appear in the circulation. During infection, however, immature cells appear in the blood stream as the result of irritation by bacterial toxins. At such times greater demands are made on the blood cell factory and, like factories in the commercial world, under pressure they allow unfinished products to get into the circulation. Schilling claims that we can evaluate the severity of the infection by the percentage of immature eells appearing in the peripheral blood.

It may be said in passing that the principal is not original with Schilling. Many of the older hematologists have recognized these morphological changes in the blood cells. They also knew that these manifestations were due to the age of the eells. Arneth first offered a classification of these cells. This later formed the basis for Schilling's work.

Schilling assumes that there are three sources of the white blood cells: First, the granulocytes—polymorphonuclear eells originating in the bone marrow; second, the lymphoeytes originating in the lymphatic system; third, the monoeytes from the endotholial system. He recognizes large and small lymphocytes as lymphocytes. The transitionals are the monocytes. He divides the polymorphonuclear neutrophiles into four classes as follows:

- Granulocytes
  - Basophiles
  - Eosinophiles
  - Polymorphonuclear neutrophiles
    - Myelocytes
    - Juveniles
    - Staff or Stabb Cells
    - Segmented or Adult Polys.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

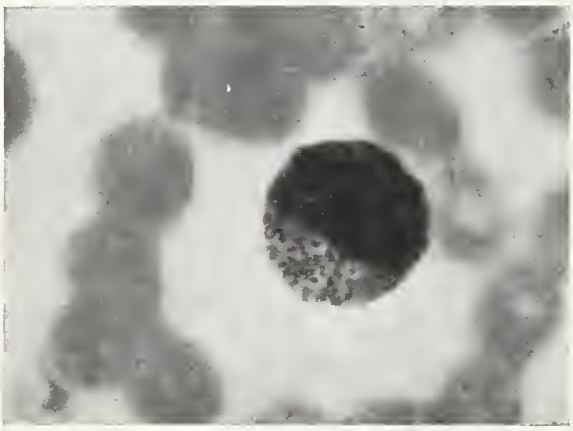
In the old or conventional differential the different types of polymorphonuclear neutrophiles were not considered. The classification of these cells is Schilling's contribution to the method. He classes the cells according to the age and determines the ages by the form of the nuclei. Toxins from pyogenic infections irritate the bone marrow and bring about the release of immature cells into the circulation. The higher the percentage of immature cells the more severe the irritation; the younger the type of cells the greater the irritation.

Toxins either stimulate or depress the bone marrow, the endothelial system or the lymphatic system. Toxins from pyogenic infections stimulate the bone marrow and have a tendency to depress the endothelial and lymphatic system. Toxins from tuberculous infections depress the bone marrow and stimulate the endothelial and lymphatic system. Typhoid toxins depress the bone marrow and stimulate the lymphatic system.

At this point it will be well to consider the clinical significance of the different white cells as described by Schilling.

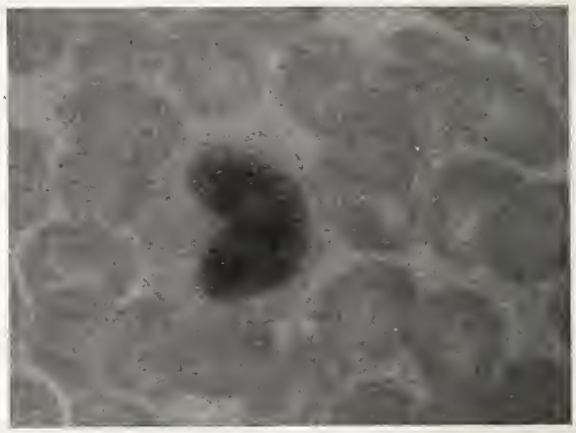
The basophiles cells with lobulated nuclei and large dark granules over the cytoplasm and nuclei, make up less than 1 per cent of the normal white cells. An increase in the number of these cells indicates poor resistance.

The eosinophiles comprising about three or four per cent of the normal white cells are the most sensitive of the granulocytes. They disappear first in acute infections and are the first to reappear as healing takes place. Absence of eosinophiles is an unfavorable finding, their presence is a favorable finding.



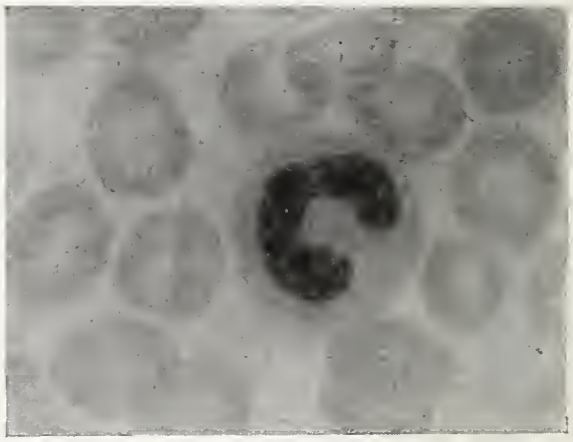
Myelocyte

The myelocyte, a bone marrow cell with nucleus coarsely granular and cytoplasm taking a faint blue stain and finely granular, is not found in normal blood. It is the last to make its appearance in infection; its presence therefore indicates extreme bone marrow irritation; it is a very unfavorable finding.



Juvenile

The juvenile cells have a sausage or bean shaped nucleus. The cytophasm is similar to that of adult cells, indistinct fine granulation. This cell, developed from the myelocyte, is a young bone marrow cell. It is not normally found in the peripheral circulation. Its presence indicates severe toxemia and irritation of the bone marrow, consequently an unfavorable finding.



Staff

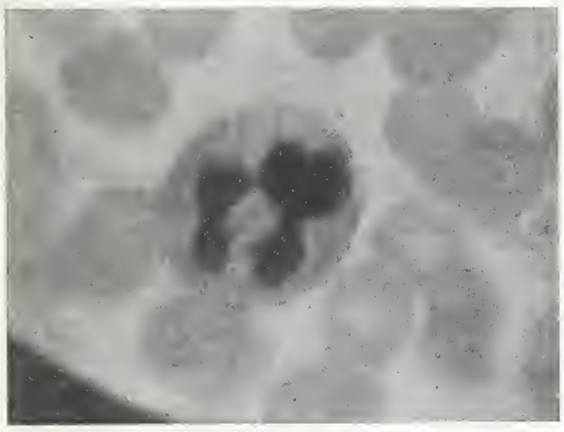
The staff cells have a U, V, or S shaped nucleus. Three to five per cent of normal cells are of this type. These cells represent a stage of development between the juvenile and adult types of the young bone marrow cells. An increase in the number of these cells indicates a bone marrow irritation.

The segmented cells are the mature or full grown polymorphonuclear cells; the nucleus has been separated into two or more parts. This mature bone marrow cell comprises about

sixty-three per cent of the white cells. Its increase is noted in infections.

The lymphocytes, making up about twenty-four per cent of the normal white cells, disappear in acute infections and return with the healing process. They are increased in chronic conditions.

The monocytes, derived from the endothelial system, comprise six per cent of the normal cells in the peripheral circulation. These cells disappear in acute infections. They return somewhat earlier than the lymphocytes. An increase in monocytes indicates a subacute infection.



Segmente Adult Polymorphonuclear Leucocyte

The differential blood count holds wonderful diagnostic and prognostic information. Just as the clinician after careful study of the symptoms of a case is able to diagnose and forecast impending danger or improvement, so that hematologist is able to elicit the corresponding symptoms in the differential count. Every clinical manifestation has its counterpart in the hematopoietic organs expressed in the peripheral blood stream.

Series of 10 Normal Counts (Schilling's)

No	Total L	Eos.	Bas.	Polys. Seg.	Polys. Strat.	Polys. Juv.	Polys. My.	Lym.	Mon	Imp
1	6.000	0	0	67	3	1	1	25	3	5
2	6.500	4	2	63	1	2	0	27	1	3
3	7.000	3	0	70	0	2	0	16	9	2
4	8.600	1	0	55	4	2	0	30	8	6
5	7.400	3	0	68	3	5	0	23	6	8
6	6.800	3	0	62	2	3	0	23	6	5
7	7.800	1	0	69	3	1	0	23	3	4
8	8.500	2	0	66	2	2	1	23	4	5
9	5.200	2	1	74	1	0	0	16	5	1
10	6.500	4	0	67	4	1	0	21	3	5
Ave.	6,944	2.3	.3	66.1	2.3	1.9	.2	22.7	4.8	4.4

Plate No. I shows a series of ten normal blood counts showing the total leucocyte counts and the differential counts after Schilling. The left shift is found in the last column at the right.

Series of Schillings Counts

No	Total L	E	B	Seg	St	Ju	My	Ly	Mon	inC	Remarks
1	13000	0	1	71	5	2	0	19	0	7	Hernia no infection Physiological
2	18900	0	0	71	16	1	0	9	3	17	Pelonephrosis, Mild irritation
3	24000	0	0	69	32	5	2	9	1	39	Broncho pneu. Severe irritation
4	10000	0	1	44	26	12	5	8	4	43	Acute app. Severe irritation
5	12700	0	1	64	5	1	0	23	6	6	App. Sub. acute. Mild irritation
6	19100	0	0	37	25	27	6	3	2	58	Per. App. Very marked irritation D
7	12700	0	0	73	3	2	2	18	2	7	Surg. dis. App. as. No path found
8	18900	0	0	46	34	16	3	3	5	52	App. as. peritonitis Very marked irr. D
9	18850	0	0	36	10	31	12	8	0	56	Gang. app. peritonitis D
10	27200	0	0	20	30	37	9	4	0	76	Osteo. of hip. Severe toxemia D
11	12400	0	0	38	27	24	4	3	0	55	Erys. Severe toxemia
12	21800	0	0	28	37	25	7	3	0	69	Inf. of prostate after chill
13	17000	0	0	64	23	6	4	2	1	33	App. gang. at operation
14	6800	7.5		65	3.5	2	2	16.5	3.5	8	Chr. inf. good resistance
15	180000	6	3	33	8.5	15	23	6.5	5	43	Myelogenous Leukemia

Plate No 2. Schilling's blood picture of fifteen different conditions. The percentage of immature cells or left shift is found in the last column of figures at the right. Note that most cases with a nuclear shift of fifty-five or above died. Case No. 12, the count was made following a severe chill; at this time the immature cells are increased in the blood stream.

CASE OF EXTENSIVE CARBUNCLE OF FOOT

Date	Leucocytes Total count	Bas.	Eos.	Left Shift My	Left Shift Jun	Left Shift St	Rt Shift Seg	Rt Shift Ly	Rt Shift Mon	Temp	Pul	Hem	Red cells	Remarks
Oct 6	8.250						74	24	2	98	82	76	3,825,000	Good day.
16	11,400		1				74	25		100	92	76	3,825,000	Resting well
19	12,500		2	1	7 3	3	82	91 8	1	100	108	71	4,250,000	Blood cult. pos. Staph. Restless
20	18,000			2	9 4	3	76	89 10	3	101	112	74	4,050,000	Pain in foot
21	17,500		1	6	22 4	12	71	77 2	4	101	110		4,000,000	Very restless
22	17,500			4	33 13	16		67		102	110	73	4,000,000	Blood cult. pos. Staph. Pain Cold Sensation
23	18,800		1	6	39 10	23	53	60 5	2	101	100	68	3,800,000	Severe Pain
24	23,600			10	40 12	18	58	60 2		102	110	72	3,625,000	Restless
26	17,900		2	2	21 8	11	74	4	1	101	108	65	3,600,000	Blood cult. pos. Staph. Severe pain
27	17,200		1	6	36 12	18	60	63 3		102	120	55	3,575,000	Transfusion Very restless

Date	Total Count	Ba.	Eo.	Left Shift My	Left Shift Ju	Left Shift St	Rt Shift Seg	Rt Shift Ly	Rt Shift Mon	Temp	Pul	Hem	Red cells	Remarks
Oct 28	17 200		1	4	31 13	14	61	68 5	2	105	120	65	3,650,000	Restless
31	17,800				23 8	15	62	77 12	3	100	100	68	3,800,000	Resting well
Nov 1	14,300		2		19 3	16	6	79 7	5	99	100	68	4,000,000	" "
3	14,400		1	1	9 2	6	75	90 11	4	99	98	67	3,900,000	Pain in foot
5	15200		2	1	14 3	10	66	84 12	8	99	100	76	3,825,000	Resting well
18	13,100		1		10 1	8	72	89 13	4	98	100	72	3,960,000	Bl. cult. negative. Nervous
10	10.100		1		11 2	9	72	98 10	6	99	100	71	3,900,000	Nervous
12	11,000		2		19	19	46	79 35		99	108	71	4000,000	Comfortable
17	11,500		1		6 1	5	65	93 18	10	98	92	68	3,875,000	Headache
19	9,000		2		10 2	8	54	88 30	7	98	90	73	4,200,000	Bl. cult. negative Good day

Plate No. 3 is a complete blood study of a case of an extensive carbuncle on the dorsum of the foot, with an invasion of the blood stream by the staphylococcus. Note the gradual rise in the left shift as the case progressed. The turning point occurred on October 28, following the transfusion. The left shift began to decrease, red cells and hemoglobin began to show an increase, blood cultures became negative. On November 10, the general blood picture approached the normal and remained practically so throughout the course of the patient's convalescence. The Schilling's differential was of considerable value in this case; it acted as a barometer, showing the progress of the infection.

Case of Erysipelas

Oct.	Total L.	Eos.	Bas.	Neutrophiles M.	J	St.	Seg.	Lym.	Mon.
				Left Shift			Right Shift		
				22			78		
27	7,700	0	0	2	9	11	72	4	2
				32			68		
28	7,400	0	0	3	9	20	63	4	1
				35			65		
29	7,000	0	0	5	11	19	55	6	4
				43			57		
30	7,000	0	0	2	21	20	57	0	0
				28			72		
31	6,750	0	0	0	8	20	61	11	0
Nov.				35			64		
1	5,400	1	0	2	7	26	46	16	2
				12			87		
2	4,500	1	0	0	2	10	62	18	12

Plate No. 4 shows total leucocytes and Schilling's differential counts on a case of erysipelas and cellulitis of the face and neck. Note the low total leucocyte counts; the differential counts, however, give the true picture of the case, manifested by the extensive left shifts. The picture indicated poor resistance; however this patient, after passing through a period of severe illness, recovered.

Appendicitis Acute Suppurative

Date Nov	Total Leucocytes	B	E	Neutrophiles Left Shift M	J	ST	Right Shift Seg	Ly	Mon	T	P	Remarks
				12			88					
13	11,100					12	79	9		101°	120	Post-operative day
				23			77					
14	7,500					23	73	4		104	150	Fairly good day
				48			52					
15	7,300				3	45	46	6		104	140	" " "
				59			41					
16	7,750			1	9	49	29	8	4	105	168	Restless
				30			70					
16	6,000			1	1	28	53	16	1	105	158	"
				51			49					
17	9,000				8	43	[illegible]	17	1	105	187	Wound drained very restless. Patient expired next day

Plate No. 5 shows a series of post-operative blood pictures. Notice the marked increase in the left shift. On the 14th and 15th, there is recorded nuclear shifts of 23 and 48; notes on the progress sheet state that these were goods days. The blood picture on November 15th indicated that the case would probably end fatally. Note the drop in the total leucocyte count, indicating poor bone marrow response.

Peritonitis Following Appendiceal Abscess

Date Aug.	Leucocytes Total count	Bas.	Eos.	Neutrophiles Left Shift My.	Juv.	Stab.	Right Shift Seg.	Ly.	Mon.	Temp.	Pulse	Remarks
				18			82					
1	19,100				6	12	63	12	7	99	90	Pain in side
				22			78					
15	20,700			2	5	15	69	9		102	110	Restless
				38			62					
17	11,000			6	6	26	51	7	4	103	110	Fairly good day
				54			46					
22	8,000			7	17	30	38	7	1	99	94	Pain in Abdomen
				43			57					
25	6,800			9	16	18	41	15	1	100	100	Resting fairly well
				31			69					
26	6,300			3	11	17	52	14	3	101	110	Marked granular degeneration of Leucocytes
Sept				48			52					
2	5,200			12	15	21	26	23	3	101	116	Normoblasts and Megaloblasts
				65			35					
3	10,100			20	20	25	27	7	1	101	120	Patient Died

Plate No. 6 shows the blood study of a case of peritonitis following the drainage of an appendiceal abscess. Note the gradual rise in the left shift and the gradual decline in the total leucocyte count, indicating a loss of resistance. On August 22, the picture showed marked irritation with a left shift of 54 and a very poor bone marrow response. Leucocyte count was 8,000. The blood study on this date indicated a fatal result. At autopsy an extensive peritonitis was found, multiple abscesses throughout the abdomen, with an extensive diaphragmatic abscess with at least two liters of pus.

Cases of acute Appendicitis

No.	Total Leucocytes	B	E	Left Shift M	J	St	Right Shift Seg	Ly	Mon	P	T	App. Acute	S. R.
1	19,600		3	2	25	17	72 62	6	4	90	100		4
2	17,000		1	5	32 5	26	67 53	115	25	100	100		2
3	9000		1		18 5	13	81 55	25	1	90	99		3
4	14,300		1	1	18 4	13	81 72	8	1	85	99		3
5	14,500	1			17 5	12	82 74	5	3	84	99		3
6	11,000		2		22		77						
				43	4	13	60	7	15	96	88		2
7	12,000				6		94						
				1	5		64	27	3	100	100		2
8	11,500		2		65			9.5					
				2	45		47	38	6	70	96		2
9	14,000				10		90						
						10	80	3	7	85	98		2
10	10,000		3		18		82						
						15	57	25		60	98		1

Av. 13,320 Av. 15.9

Plate No. 7 shows blood pictures in ten cases of acute appendicitis. The average total leucocyte count and the average left shift is given.

Bilateral Lobar Pneumonia

Date Dec.	White Count	B	E	Left Shift M	J	ST	Right Shift Seg.	Ly.	Mon.	T	P	Remarks
				43			57					
20	28,000	0	0	1	14	28	45	8	4	102	120	Pain in right chest.
				40			60					
22	12,100	0	0	0	11	29	52	3	5	105	122	Pain in both sides of chest
				46			54					
23	12,900	0	0	0	8	38	49	8	2	102	112	Nervous and restless.
				47			53					
24	16,400	0	0	0	3	44	48	8	4	102°	118	Severe Cough.
				55			45					Entire R. lung involved
26	32,600	0	0	2	12	41	43	1	1	102	120	Suppurating Respiration shallow
				46			54					
27	25,400	0	0	0	8	38	46	6	2	100°	126	Resting some better.
				51			49					
28	26,200	0	0	0	6	45	35	10	4	98°	96	Resting quietly.
				40			58					
29	23,900	0	2	0	8	32	48	11	2	98°	88	" "
30	23,000	0	0							99°	88	" "
							70					
31	19,000	0	1	5	20	28	55	3	12	98°	82	Feeling better.
Jan.				43			57					
1	13,400	0	0	4	18	25	48	4	0	98°	88	Slight cough.
				30			70					
3	7,600	0	0	0	12	18	58	27	5	98	100	Comfortable

Plate No. 8 shows a case of bilateral lobar pneumonia counts showing high nuclear shifts. these do not always indicate a fatal outcome in this disease. This patient recovered, although there was a shift of 55 on one day. The bone marrow response as manifested by the high total white count was pretty well sustained throughout the course of the illness.

W.L.N. Case No. 204-31

Dec. 1-26-31 Clinical Diagnosis Secondary Anemia Infection Gum & Teeth 11/1/13

		Normal %
B. Basophiles		5 0-1 Bas.
E. Eosinophiles	2 1	3 2-4 Eos.
Neutrophiles: Myelocytes		0 N. Myel
Juvenile cells	2 1	0 1 N. Juv.
St. Staff cells	18 9	4 3-5 N. Stab
S. Segmented cells	124 62	63 54-62 N. Seg.
L. Lymphocytes	44 22	23 17-25 Lymph.
Mon. Monocytes	10 5	6 4-8 Mon.

Leucocytes per cu. mm. 10300 Poikilocytosis Marked
Erythrocytes " " 1,500,000 Anisocytosis Marked
Hemoglobin 25.7 % Color index .85 Polychromasia Mild
Normoblasts NONE Punctate basophilia Mild
Megaloblasts NONE Slight increase of Leucocytes with moderate increase in % of Immature Cells indicates Mild irritation by bacterial toxins Kilbury Laboratories.
Remarks.
Redcells Low – Hem. Low – Absence Normoblasts – Color index below 1 – Indicates Secondary Anemia.

Plate No. 9 shows Schilling's hemogram with interpretation of findings. This report gives the clinician a rather complete study of the hematological manifestations of the blood stream.

No 1

Puerperal Infection JAP 2559-31

Date Oct.	Red cells	Hem	B	E	Left shift M	J	St	Seg	L	Mon	Leucocytes	Remarks
3						7	7	78	11	4	14,800	Nausea
7						17 8	9	67	15	1	5,900	Trans Chill Bad night
9						14	14	71	13	2	9,400	T 105 Rigor BLCneg Trans
10	3,800,000	52				6 1	5	86	8		10,400	BLCneg Good day
11	3,250,000	55				11	11	71	17	1	9,500	" "
12	3,300,000	53				7	7	70	18	5	8,500	BLCneg " "
13	3,000,000	49				6	6	72	19	3	8,300	" "
15	3,250,000	47				9	9	71	16	4	10,000	Temp 105 Rigor
16	3,125,000	46				9	9	74	10	7	10,000	Temp 104 Aching Sens Tr 2
17	3,000,000	46				7 1	6	76	17		11,500	T. 103.6 Good spirits Tr. 2

No 2

Puerperal Infection JAP 2559-31.

Date Oct	Red cells	Hem.	B	E	Left Shift M	J	St	Seg	L	Mon	Leucocytes	Remarks
18	3,250,000	47			1	5	4	80	8	7	10,000	T 103.6 Very good day Tr. 2
19	2,800,000	44				10 1	9	70	17	3	13,000	T. 105.6 Very good day Tr 2
20	2,700,000	45				6	6	66	21	6	12,000	T. 101 Very tired Tr 1
21	2,700,000	44				7	7	76	17		15,000	T 102.2-97° Trans, Rigor
22	3,000,000	46				8	8	80	13	1	14,600	T. 101.2 Good day Tr 2
23	3,250,000	47				4	4	80	11	5	15,000	Good day Tr. 2
25	3,250,000	46				3	3	81	12	4	13,500	Good day Tr 1
28	4,150,000	53				1	1	66	29	5	8,700	Able to sit up Tr 1
30	4,000,000	53		5		0		58	31	6	7,700	Up in wheel chair Tr 1
Nov 1	4,000,000	54		3		2	2	62	28	5	4,800	Left hosp.

Plate No. 10 is a series of blood pictures on a case of puerperal infection. This patient was very sick during the first three weeks, as indicated by the temperature record; however the blood picture indicated a good result throughout the progress. It will be noted that the left shift is comparatively low while the total white cell count is rather high in most instances.

Left shift = sum of myelocytes + juveniles + stab or staff cells.

Puerperal Infection Peritonitis BHL 2778-31

Date Oct.	Hem	Red cells	Leucocytes	Left shift M	J	St	Seg	L	M	Remarks
25	66	4,575,000	25,000		24 1	23	63	7	6	Temp 103. Sharp pains inside.
26			18,700	1	40 4	35	50	5	5	Temp 102.6 Very tired No improvement
26			16,000	6	50 18	26	44	2	4	Restless from morphine Restless Preparing Suffering
27			16,000	6	75 18	51	23	2		T 103.8-105.6 Died 9.40 PM

Plate No. 11 shows the blood pictures of a case of pelvic peritonitis which followed a rupture of the uterus; notice the marked fall of the total leucocyte count and the marked increase of the nuclear shift to the left, indicating a fatal outcome. Patient died after three days in the hospital.

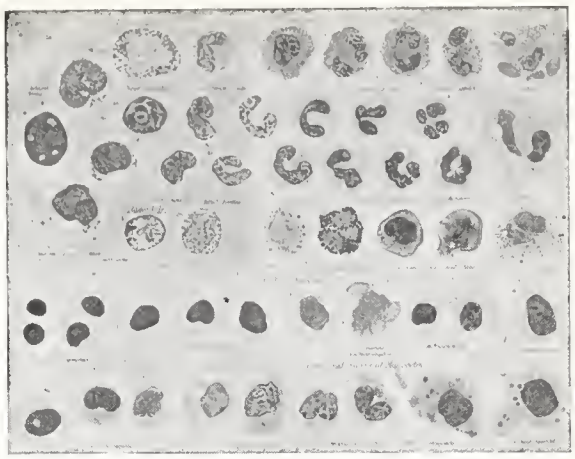


Plate No. 12 is a drawing taken from "The Blood Picture" by Schilling and Gradwohl. In the upper left space are seen the true bone marrow cells; to the right the different types of peripheral blood cells. In the middle row the different types of lymphocytes are shown. In the last row the monocytes arising from the endothelial system are seen.

In closing, I wish to say that as a result of experience in our laboratories the value of the Schilling's count has been demonstrated. I believe that this method will increase the value of the differential count one hundred per cent. It is quite natural, when working with a new method such as this, for one to become over-enthusiastic. It will be necessary for hematologists and clinicians to work together in order to derive the greatest benefit from this new method. Valuable information may be obtained by a careful study of the patient's blood after the method of Schilling. The resistance of the patient and the severity of the infection, as well as an accurate prognosis, can often be ascertained.

DISCUSSION

DR. S. J. WOLFERMANN, Fort Smith: I wish to thank Doctor Kilbury for bringing this excellent paper to us. It is most valuable.

There is one point I would like to further emphasize in regard to this count which we find very useful in considering those cases of appendicitis that so frequently worry the diagnostician and surgeon. I mean the case of appendicitis that is sent in to the hospital too late for early operation and too early for late operation. On this type of case a Schilling count should be made every twelve or twenty-four hours if necessary, and it will tell you practically where you are at all times.

This was recently illustrated in a case we had under observation that walked into a surgeon's office and when examined in the office showed a definite abscessed mass in the right iliac region,

which was a definite appendical abscess five days old. He was put to bed in the hospital and the usual treatment instituted for appendical abscess, but on the third morning after he was put to bed a Schilling count which had been gradually showing a lessened shift to the left, suddenly made a marked switch to the left. It was then that we saw this case in consultation and advised, due to the Schilling count that something had happened and that immediate drainage was probably indicated. The surgeon not having faith in the Schilling count waited for an additional twelve hours and a further shift to the left being evident, surgery was then accepted, and upon opening abdomen, the walling off process which had been going on for eight days, for some reason had been broken through and there was beginning general peritonitis. This was definitely indicated by the Schilling count before any clinical manifestation was evident.

Another thing worth while emphasing is that in eclampsia there is a shift to the left.

The danger with all laboratory procedures is that we get careless and are inclined to shift a little too far ourselves and depend too much on the laboratory. We must remember, as Doctor Hinkle has previously said, that we are doctors first, and that interpretations as physicians from the clinical side are the most important factors in our work, and that then the laboratory procedures of all kinds are valuable additions and aids to us in both diagnosis and prognosis.

DR. S. B. HINKLE, Little Rock: I should not take the responsibility for this discussion. The matter of counting and classifying of blood cells is up to the hematologist, but it is of such vast importance to the Clinician that I want to say a few words about it.

Dr. Kilbury is enthusiastic on the Schilling differential count, and I am sure with good reason. Certainly he has in a number of my cases and cases with which I have been associated, been able to very closely estimate the condition of the patient from day to day throughout her illness and prophesy changes before the clinical signs and symptoms gave any such evidence or warnings. In this connection I have in mind a puerperal case who was apparently doing well in all respects except for a feeling of uneasiness and apprehension. A blood study was ordered and Dr. Kilbury promptly assured us that something unusual was happening. The following day his estimation was justified by a chill and high fever.

In the treatment of our seriously sick individuals, we have learned to rely upon our hematologist, and particularly so where surgery is being considered. He has in all cases been able to give us a reliable estimation of the virulence of the organism and the capacity of the patient to combat it.

In prognosis the Schilling count has been most valuable. It does not tell us and Dr. Kilbury often completely studying the blood, cannot usually tell us if our patient will live or die. This depends too much upon other factors, as for instance the infecting organism. The structure infected, the condition of vital organs, the capacity of the patient to take nourishment, etc., but he can tell us from day to day whether we are winning or losing.

The development of the Schilling count and estimation of blood values must bring us all more closely to the educated and trained hematologist, and more surely fixes his importance in the study and treatment of disease. Our technician who has had eight or twelve months of training and practice, has justified her place in our offices and is of a great deal of importance to us, but after all she is only a technician.

DR. KILBURY, in closing: I have little to say except to thank the gentlemen for this discussion. I am glad Dr. Wolfermann brought out the point he did. We have had several cases like that and it shows one thing that I should emphasize, and that is the relationship between the laboratory and the clinician. I do not think we should depend upon the laboratory test altogether, but there should be a closer relationship between the laboratory and the clinician in working out the problems of medicine and surgery.

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TREATMENT OF CONGESTIVE HEART FAILURE*

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Introduction

It is to be admitted at the outset that the onset of congestive failure signifies the beginning of the end in any case of heart disease. It is realized that the average length of life after the appearanee of symptoms of sueh failure is about two years. Yet inasmueh as at the present time sueh eases eonstitute a eonsiderable proportion of the eardiae patients we are ealled upon to treat, and inasmueh as the prognosis in every case is an individual affair it would seem well worth while to eonsider ways and means to seeure the maximum of relief for as many as possible, and the addition of several eomfortable, fairly useful years for a fortunate few.

Definition

Inability of the heart to propel enough blood through the body to permit the earrying on of the ordinary physieal aetivities of life eonstitutes heart failure. We recognize

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two main types of failure, *anginal* and *congestive*. Congestive heart failure is what its name signifies, myocardial failure accompanied by chronic passive congestion and, depending upon the degree of failure, is characterized by venous engorgement, rapid or irregular heart action, cyanosis, dyspnoea, pulmonary congestion, enlargement of the liver, oedema, Cheyne-Stokes respiration, alternation of the pulse and other signs or symptoms included in that vague term "decompensation." It is with the latter type that this paper deals.

An intelligent discussion of the treatment of congestive heart failure demands consideration of the underlying etiological factors. To promote a clearer understanding this paper will deal with the five common types which together account for more than 95 per cent of all cases; these five are, rheumatic, hypertensive, arterio-sclerotic, syphilitic and hyperthyroid.

Rheumatic Heart Disease

Rheumatic fever is an infectious disease of unknown origin. It is essentially a childhood disease, but the patient is subject to acute exacerbations in later years. One of its most frequent and by far the most dangerous of its manifestations is cardiac involvement. Following an overwhelming toxemia death may result from a pan-carditis early in the disease, but the average age at death is about 35 years. Those who survive the active stage show certain anatomical changes in the heart. The most common are those resulting from the endocarditis, namely mitral stenosis and insufficiency and aortic stenosis and insufficiency. Incidentally rheumatic fever is the only known cause of mitral stenosis.

The acute myocardial involvement is followed later by diffuse atrophy of the muscle fibers and not infrequently by involvement of the conduction system resulting in various grades of heart block.

Pericardial invasions may later cause fibrous pericarditis or adherent pericardium.

Hypertensive Heart Disease

This is the type characterized in the earlier stages by elevated blood pressure, forceful beating of the heart and moderate cardiac enlargement. It tends to progress slowly over a course of years not reaching the climax of congestive failure for a decade or longer. The systolic pressure gradually rises, followed more slowly by an increase in the diastolic readings. The heart responds to its increasing load by dilatation and hypertrophy.

As time passes peripheral resistance increases, myocardial failure ensues, the systolic pressure begins to drop and as the left ventricle fails to empty itself completely the diastolic pressure rises. The resultant decrease in pulse pressure coincides with the appearance of symptoms of congestive failure.

Arterio-Sclerotic Heart Disease

Although this type of heart disease accounts for the majority of cases of anginal heart failure because of the coincident coronary sclerosis, many patients suffer only from congestive symptoms. In addition a considerable proportion of patients with angina later develop congestive failure. As a result of the greater restriction of activity their anginal symptoms may disappear, as graphically represented by Reznick. (1) In other words dyspnoea limits their efforts short of the point at which angina formerly occurred. Unless a coincident hypertension is present these patients usually have no cardiac enlargement. The process is one of gradually increasing fibrosis, a condition for which Hymen proposes the descriptive term "myocardosis" in place of the usual word myocarditis which improperly suggests inflammation. The correct terminology at present according to the nomenclature of the American Heart Association is "myocardial fibrosis."

Syphilitic Heart Disease

Congestive failure in syphilitic cardio-vascular disease is usually secondary to aortic insufficiency or more rarely to interference with the coronary blood supply from involvement of the coronary ostia by the syphilitic process in the aortic walls. While myocardial invasion by the spirochaete has been repeatedly demonstrated pathologically by Warthin and others, clinical evidence of such invasion is negligible, and it is extremely difficult to make a correct clinical diagnosis of syphilitic myocarditis. Anti-syphilitic therapy is added to our other treatment, but much caution must be observed. Prolonged preliminary treatment with mercury and iodides is necessary. Salvarsan given prematurely or in too large doses may induce therapeutic shock and premature death. Bismuth may be used to advantage following mercury, particularly in

cases considered unsuitable for the arsenicals. Of the latter my personal preference is for silver salvarsan 0.1 gram weekly.

Hyperthyroid Heart Disease

The essential point to realize in dealing with these cases is that the cardiac involvement is only part of the general picture of thyrotoxicosis. There is an increase in pulse rate and pulse pressure. This latter is generally distinguishable from the increased readings in hypertension with its rise of diastolic readings. The diastolic pressure in hyperthyroidism tends to remain at normal or slightly lowered levels, the increase being in systolic readings alone. Paroxysmal arrhythmias are common in hyperthyroidism.

Therapeutic measures directed to the heart alone are doomed to complete failure. On the other hand thyroidectomy without any special cardiac therapy may so completely clear up the disturbance that no evidence of cardiac trouble remains. It has never been proved that even when death occurs from thyrotoxicosis that it is due to cardiac changes.

General Therapeutic Measures

Rest: Absolute rest in bed is a foundation stone of treatment without which further procedures are useless. The only excuse for getting out of bed is for the purpose of using a bedside chair-commode. For the average patient this entails less exertion than the use of the bed-pan.

Diet: As an initial measure a Karrell diet consisting of 800 cc. of milk daily for two to four days is of great value. Because of the low caloric content and restricted fluid intake it cannot be maintained longer. Smith and his associates (2) at the University of Iowa have elaborated a diet which has proved quite satisfactory. It is essentially a low protein-high carbohydrate diet with a total energy value of 2100 calories. It is served in the form of milk, cream, butter, eggs, vegetable purees, cooked cereals and fruit juices. Frequent feedings are given to prevent distention. I have used a lemonade made up of 200 gm. of glucose in 1000 cc. of water and the juice of three lemons as an adjunct to their diet.

The fluid intake can gradually be increased up to 1500 c.c. Sodium chloride is prohibited but a substitute salt called Eko made by Sharpe and Dohme can be used moderately if the patient complains too bitterly of salt restriction.

Venesection: The result of venesection as a measure for relieving excess venous pressure hardly justifies its routine adoption. In exceptional instances for example acute dilatation and pulmonary oedema it may give spectacular relief but this is usually only temporary and its repeated use is impossible.

Catharsis: Severe purging for the purpose of removing excess fluid from the body is comparable to repairing a watch with blacksmith's tools. The amount of the patient's physical energy wasted is entirely out of proportion to the amount of the fluid eliminated. The introduction of the newer diuretics has rendered purging obsolete. It is better to use milder laxatives sufficient only to induce normal bowel movements with an enema if necessary in the more obstinate cases.

Drug Therapy

Digitalis: Probably no drug used by the medical profession is subject to greater variation in application and dosage than digitalis. That a diagnosis of heart disease automatically calls for the exhibition of digitalis seems to be a firmly implanted principle of therapeutics. Aside from the fact that digitalis is of no value in some forms of heart disease and may be definitely contra-indicated in other types, there is also the fact that a mere acceleration of the heart rate does not necessarily mean heart disease, and the term "digitalization" does not mean a range in dosage from two minims daily for ten days to ninety minims a day for a month.

Time does not permit a lengthy discussion of the principles underlying the correct use of digitalis, but may I mention briefly a few of the more important.

In the first place digitalis is a cardiac poison and is indicated only when its therapeutic effects may be reasonably expected to overbalance its toxic effects.

Sir Thomas Lewis maintains that digitalis has been proved to exert only two effects, first, an increase in the refractory period of the auriculo-ventricular node, second an increase in the conduction rate of the cardiac muscle. The only indications for its clinical use then are, first, in auricular fibrillation to slow the ventricular rate by blocking off at the A-V node the shower of impulses aris-

ing in the auricles, and second in auricular flutter to break up the fixed circus movement and expedite restoration of normal rhythm.

Most cardiologists favor its use in congestive failure with dyspnoea, and particularly edema. It is quite possible that in such cases where cardiac dilatation is a feature that digitalis decreases the diastolic expansion and enables the heart to work more efficiently with less expenditure of energy.

There is no question but that digitalis is much more effective where auricular fibrillation is present than in cases with regular rhythm. This is particularly true in the arterio-sclerotic type of heart disease with fibrillation. It is not as effective in rheumatic heart disease where auricular fibrillation is secondary to mitral stenosis and auricular hypertrophy. Digitalis is least effective in the arrhythmias due to hyperthyroidism.

The guiding principle of digitalis dosage is to give it until the therapeutic effect has been attained. Although individual tolerance varies it is well to be familiar with the Eggleston method of determining the total amount of drug necessary for digitalization. This he has found to be 1.5 gram of the leaf or 15 cc. of standardized tincture per 100 pounds of body weight for the average individual who has had no digitalis for at least three weeks previously. Half this calculated amount may be given at once, the remainder in divided doses over the next thirty-six to forty-eight hours. The reason for giving it so quickly is that full therapeutic effects of digitalis are not obtained until this point of "digitalis saturation" is reached. Following this rapid digitalization no more is given for two days. Then the average dose necessary to maintain digitalization is about 1 gram of the leaf or 10 cc. of the tincture weekly. This is conveniently divided into five daily doses of 0.2 gram or 2 cc. Inasmuch as it takes from six to fourteen hours for any single dose to reach its therapeutic peak and as it takes from two to three weeks to be excreted there is no advantage in subdividing the daily dose. Inasmuch as there is always an element of doubt as to whether the patient is accurately measuring his dosage of the tincture, and since tinctures and particularly infusions deteriorate much more rapidly in comparison with leaf preparations it seems more rational to use standardized leaf preparations for digitalization. The indications for intramuscular or intravenous of digitalis are extremely rare.

In auricular fibrillation the amount of digitalis necessary can easily be checked by counting the ventricular rate at the apex. It is much more difficult to gauge the correct amount in the presence of regular rhythm. Careful watch must be kept for toxic signs such as nausea, vomiting, diarrhoea, extrasystoles, dropped beats of heart block or the rapid regular rhythm of ventricular tachycardia.

The presence of fever complicates the exhibition of digitalis, nullifying its effects and masking early toxic symptoms. Sudden toxic digitalis death may occur without warning as pointed out recently by Wycoff (3) in discussing the dangers of digitalis in pneumonia.

With plenty of good digitalis preparations available it does not seem necessary to fall back on the "poor relations" of digitalis, e. g. Squills.

Cardiac stimulants: Far and away the most effective cardio-respiratory stimulant is caffeine sodium-benzoate. It may be administered in dosage ranging from 3 to 7 gr. hypodermically every four hours up to 15 gr. intravenously in cases of shock or collapse. Small ineffectual doses have resulted in switching to other preparations which are now known to be useless, e. g. strychnine, cactina, camphor-in-oil. (4) Several synthetic camphor compounds are now on the market. They seem to be poor substitutes for caffeine (5).

Hypnotics: Rest in bed in itself does not insure the relaxation and sleep essential for myocardial rest. Consciously or unconsciously most patients with congestive failure fight sleep. This may be due to an instinctive fear that they may never wake again or it may be due to physical discomfort. To secure this essential physical and mental relaxation it is usually necessary to use hypnotics. Morphine is the paramount drug for this purpose. It is particularly useful in the early acute stages or in the terminal stages. It may be used in quantities necessary to produce the desired effect for example ¼ gr. repeated twice if necessary at three or four hour intervals. A particularly large heavy individual may need ½ grain as the initial dose. To avoid respiratory depression each dose may be combined advantageously with 1-150 gr. of atro-

pine. These small doses of atropine do not seem to accelerate the cardiac rate.

During the more chronic stages of failure milder hypnotics may be substituted. *Allonal, luminal* and *amytal* are often satisfactory by mouth. *Luminal-sodium* 2 grs. can be used hypodermically to prolong the effects of other sedatives. One of the most effective hypnotics for oral administration is *chloral hydrate*. It has the advantage of being liquid and capable of being disguised by administration in liquor. As pointed out by Marvin (6) the usual dose advocated in the pharmacopoeias is too small. He advocates average doses of 15 to 20 grs. and if necessary up to 25 or 30 grs. and states he has never observed the theoretically dangerous by-effects. I personally have given 30 grs. and repeated the dose twice at four hour intervals with very satisfactory results in patients uncontrollable by ordinary doses of morphia. The manufacturers of *sodium amytal* advocate caution in its use in cardio-vascular degeneration. A patient wtih advanced cardio-renal disease who developed hallucinations and maniacal impulses with threats of self-destruction was given 10 grs. of sodium amytal intravenously. He was asleep before the needle was with-drawn. Cyanosis became more marked and respirations were of the Cheyne-Stokes type with apneic periods of 20 to 25 seconds. After ten or fifteen minutes his color and breathing become better. The heart rate slowed from 160 to 140. He awoke in two hours, but by alternating chloral hydrate 30 grs. and sodium amytal 6 grs. by mouth when he awoke he was kept asleep the greater part of forty-eight hours. At the end of that period he was much more rational and the respiration and pulse were better than before. Such measures are desperate and for use only in the greatest emergencies.

Diuretics: Many patients suffering from congestive failure with edema fail to respond to the simpler measures of rest, restriction of fluid and digitalis. For use in removing large quantities of edema fluid we have available a number of newer compounds which are of considerable value.

Of those given by mouth *theocin* is particularly effective. The usual dose is 3 gr. three or four times a day for three or four days. It has the disadvantage of frequently producing gastric distress. This may sometimes be alleviated by giving it on alternate days only. *Theocalcin* is better tolerated but much larger doses are necessary, 30 to 60 grs. daily for four or five days. Smaller doses may be continued over longer periods of time. *Diuretin* is similar to theocin in dosage and effect. Theophyllin-ethylene-diamine has been used for about seven years in Germany. It has been used for several years in this country in tablet form particularly for anginal heart failure. Recently it has been made available in ampoule form for intramuscular and intravenous use. Several different pharmaceutical houses market it under the trade names *metaphyllin, thephyldine* and *aminophyllin*. It is not very effective by mouth as a diuretic. Better results are obtained by intramuscular injection of 2 cc. (.48 G.) daily for several days. The intravenous route is still more effective. I have obtained the most marked effects by combining theophylline-diamine with glucose solution giving 40 cc. of 50 per cent glucose plus 10 cc. (.24 G.) metaphyllin intravenously. *Glucose* alone in hypertonic solution (20 to 50 per cent) has been used with considerable success. By altering the osmotic relationship of the blood stream and edematous tissue it helps to draw this fluid into the circulation for elimination. Glucose supplies energy in a readily available form to the cardiac muscle and is also thought to exert a detoxifying effect upon the liver.

Particularly effective for the removal of large amounts of fluid are the mercurial preparations, *novasurol* and *salyrgan*. A preliminary dose of 0.5 cc. is given intravenously and increased 0.5 cc. at a dose up to 2 cc. given at intervals of four or five days. Their effectiveness is increased by giving ammonium chloride 6 to 10 grams daily during its administration. The contra-indications are the presence of fever or cachexia.

Conclusion

General measures have been outlined for the treatment of the patient suffering from congestive heart failure. An attempt has been made to bring out some of the principles guiding the use of these measures. Application to the individual patient often taxes the physician's resourcefulness to the utmost and often his best efforts will be crowned with failure, his only consolation being the knowledge that everything possible was done. An occasional brilliant result will reward his persistance, however, and he will experience that

thrill of satisfaction which results from actually saving the life of his patient.

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DISCUSSION

DR. P. R. GILMER, Shreveport, La.: I appreciated Dr. Sullivan's complete paper on heart failure. I would like to ask him a question, and to do that I will cite a case. It may not be of interest to every one present, but if you ever encounter this same situation, and have the family call every doctor they can think of, I think you will agree that if some one can tell us something to do in this type of emergency, the case will be of more interest to us all. This particular patient was a woman about 26 years of age, in a sanitarium for the treatment of pulmonary tuberculosis, far advanced with a cavity in the right apex, and a small amount of involvement in the left. The patient went along very nicely for about six months. Slight improvement was made, but she still was not doing as well as we desired. We decided to institute pneumothorax on the right side in the hope of closing the cavity. This was unsuccessful. Apparently the lung was stuck and we weren't able to introduce any air at all. About a month after this attempted pneumothorax, the patient became short of breath. Hypostatic pneumonia developed at the base of both lungs. This was associated with an increase in the pulse rate up to about 140 or 150, of small volume, cyanosis, and a little difficulty in speaking and swallowing. I realized that some sort of complication with the heart was present, but didn't know exactly what it was. The usual dose of digitalis was given, but no relief obtained. The x-ray disclosed that the heart had changed sides; instead of being on the left side, it had practically rotated over to the right side. That is the one question I want to ask the doctor about, the effect of mechanical displacement of the heart on the heart muscle. We frequently see the heart move from one side to the other in the treatment of pulmonary tuberculosis but I have never met the trouble this patient had, with acute dyspnea, tachycardia, cyanosis, difficulty of swallowing and loss of voice. The film also showed the left diaphragm was paralyzed. The loss of voice possibly was due to a pulling on the inferior laryngeal nerve. Attempts at digitalization were futile. This patient lasted about two weeks and died very suddenly. It was what I expected, but during that two weeks' time I was trying to think of something to do for the patient and wasn't able to. It was a most trying situation, and I was wondering if the doctor had any experience with heart failure occasioned by displacement of the heart. If we had induced pneumothorax and there had been air in the pleural cavity, we could have taken the air out in hopes that the heart would go back to the right place, but there was no pneumothorax. This cavity at the top of the right lung evidently was larger than the film showed, and it gave way and allowed the heart to twist on itself and come over to the right side.

DR. O. C. MELSON, Little Rock: I appreciated the doctors paper. Any discussion of it seems unnecessary, however, I think some of the good we can get from it is the fact that he speaks of other things besides digitalis and other drugs. Rest and diet are of particular value in the treatment of congestive heart failure. There is no doubt, in my mind, at any rate, that a salt-free diet in hypertension cases is of special value. I believe, contrary to Dr. Sullivan, that in some of these cases rather active catharsis may be of some value.

Any discussion of digitalis would take us all afternoon. I am only going to mention it in one regard and that is in regard to the danger of giving digitalis in the face of possible diphtheritic heart failure. As you are all aware, diphtheria attacks the conduction system of the heart and we may have a latent heart block. Also you are all aware that digitalis affects the conduction system and may produce heart block and it is especially prone to produce a heart block in the face of diphtheritic heart disease.

Dr. Sullivan has cast aside any of the relations of digitalis, but I want to say a few words in favor of strophanthus especially in these cases of pulmonary edema where digitalis may not be of very much value. My personal experience tends to prove that strophanthus is particularly efficacious in some of these cases.

DR. ROY NORTON, Fort Smith: I am sure that we all have appreciated Dr. Sullivan's remarkably comprehensive paper, and I wish to emphasize along with him the importance of rest. Rest is the most important thing in the treatment of heart failure. I am glad that he brought out the point that sometimes when we feel sure that the patient is at rest, in many instances he is not. This is shown by the rapidity of the pulse, and the failure of the patient to improve properly. If we give sedatives to the point where the patient stays asleep most of the time, or at least is very sluggish, we get better results, because not only do the voluntary muscles become relaxed, but the heart can slow down and get more rest.

Because of some recent cases we have seen, I would like to ask Dr. Sullivan if he knows of anything, other than the ordinary treatment, that we can do in cases of acute congestive myocardial failure in the influenzal type of infection. I refer particularly to cases where there is a rapid coming-on of cyanosis with pulmonary edema, and rapidly progressive failure of the heart muscle. I would like to know if he has any suggestions that would help us out in such cases, because we all feel so helpless when we encounter them.

DR. SULLIVAN, in closing: We haven't had very much experience with tuberculosis in Hot Springs. From what you tell me of that case, my impression is that in all probability it resulted more from the infection and the trouble

which caused the mechanical displacement of the heart rather than heart failure itself. We sometimes see a rather marked displacement of the heart without any particular myocardial disease. I feel that probably in this case death was the result of the acute infection, the toxemia, rather than any particular cardiac involvement.

Dr. Melson mentioned strophanthus. That is a remarkably potent drug, but like any drug which is very potent it is also a dangerous drug, particularly if digitalis has been previously used. The reason I don't favor it is that so very much care is required in giving it, but it is a good drug in certain circumstances.

Dr. Norton suggested rest. That is very essential. We in good health don't appreciate the difference in the demands on the heart between lying in bed and even sitting up in a chair and then again the enormous difference between sitting in a chair and being about the room; but there is a great difference, and rest means absolute rest in bed.

Concerning the effect of influenza on the heart, I think it is the feeling of most cardiologists that influenza in itself does not particularly affect the heart. However, in cases in which there is any underlying cardiac trouble, influenza may light that up and bring it to the surface. The treatment then is the treatment of the underlying heart condition. In those cases caffeine-sodium-benzoate and intravenous glucose are particularly effective. As a rule, digitalis has very little or no effect.

A PLEA FOR THE USE OF SPINAL ANESTHESIA IN SELECTED CASES*

W. Decker Smith, M. D., Texarkana

Spinal anesthesia was first used some twenty or twenty-five years ago but was soon discarded as an unsafe anesthesia. It has been used since by various operators but not as a routine until the last four or five years and since this time practically every medical and surgical journal contains reports of large series of cases.

There has been several factors that has made spinal anesthesia safer and more popular. First the type of anesthesia now used is by far less toxic than cocaine which was first used as an anesthetic substance. Second, anesthesia has become more controllable by the various methods introduced and the use of Trendelenburg position in controlling unfavorable reactions.

Stabins and Morton (1) believe it has numerous advantages over general anesthesia. It is especially useful for technical advantages, especially in gall-bladder and pelvic operations, non-inflammatory conditions of stomach and intestines, early intestinal obstruction, obese individuals with ventral hernias and major surgery in diabetics, due to the fact that there is no disturbance in metabolism and general routine treatment and because of lack of renal depression or irritations, also active pulmonary tuberculosis unless marked hypotension is present. There is less post-operative discomfort and complications and is especially useful in paralytic ileus, which is non-inflammatory and not associated with mechanical block.

Ducuing (2), after some six thousand cases of spinal anesthesia believes it quite much safer than ordinary inhilation anesthesia. He observed three deaths which could be charged to the anesthesia. One was a man aged seventy-two years, one with a man with peritonitis from appendicular perforation, and one in a woman exhausted from hemorrhage. There was one meningeal reaction in a young man who had had encephalitis at the age of six years. Urinary retention was less common than after ether anesthesia. It is his final conclusion that within the proper limits, spinal anesthesia represents a perfect anesthesia, because it facilitates certain operations, simplifies the post-operative course and diminishes the total mortality.

Babcock (3) following twenty-four years' experience believes spinal anesthesia properly employed has no equal for abdominal operations. There is not only complete freedom from pain but absolute relaxation of voluntary muscles.

Cosgrove (4) points out that spinal anesthesia has the same advantages as in general surgery. The preservation of uterine tone lessens tendency to hemorrhage, while relaxation of skelatal muscles reduces the risk of laceration of soft parts. The absence of renal and hepatic irritation, preservation of patients consciousness and the lack of any dele

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

terious effect on the fetus, makes spinal anesthesia very useful and a practical type of anesthesia in selected cases of obstetrics.

Jeck (5) has employed this type of anesthesia in over six hundred cases of lower urinary surgical conditions also in about ten kidney operations. He feels that it is especially indicated in urinary surgery where so much depends on conserving kidney function. Nephrectomies are rendered comparatively easy by virtue of complete relaxation obtained.

Albee and Fry (6) find spinal anesthesia useful in orthopedic surgery due to the complete relaxation allowing maximal exposure of the field of operation.

James T. Case (7) expresses his enthusiasm for this form of anesthesia as a result of an experience with eleven thousand cases.

Brooks (8) of Detroit, following some 3,000 cases in which spinal anesthesia was employed thinks it the ideal anesthesia in most laparotomies. Percy (9) of Chicago uses this type of anesthesia practically routinely in most abdominal laparotomies. He states, due to the absolute relaxation, blocking of all sensory impulses and lack of post-operative shock, it has allowed him to do various operative procedures in one stage with comparatively less shock and more safety, which previous to the use of this type of anesthesia required several stages to complete.

Gaston Lebat (10) remarks, in order to eliminate some of the dangerous features, the technique should be simple and its indications and limitations well understood. Its wholesale application should be discouraged only to the application of surgical necessities. The first mistake that led spinal anesthesia to the brim of disrepute was the fact that it was given to all patients for all types of operations. Its use in operations on the head, neck and trorax involves an element of risk that is much more greater than is intended for operations below the diaphragm. It should not be used in intestinal perforation and local peritonitis because the vagus or motor accelerator nerve of the gastro-intestinal tract is free to over exercise its function after the blocking of the sympathetic system.

With a review of the mechanism that produces circulatory and respiratory collapse, it can be shown how some of the unfavorable complications can be controlled. The anesthetic solution injected into the sub-arachnoid space breaks the afferent and efferent paths. Transmission of sensory and motor impulses are interfered with in the territories supplied by the nerves injected thus producing a vasomotor paralysis. The splanchnic system is relaxed in proportion to the number of nerves blocked in the sub-arachnoid space. Should the anesthetic solution extend to the fifth thoracic nerve the abdominal blood vessels become dilated requiring more blood at the expense of the peripheral blood vessels. The dependent parts become the richest supplied and the elevated parts become the poorest supplied with blood. It can easily be seen that in case the head is elevated the brain will suffer from an acute anemia which results in general respiratory disturbances. With this review in mind of the mechanism of this severe complication, it can be seen that Trendelenburg position is the remedy.

Lebat (10) states the level of anesthesia is not disturbed by the posture and the extent of the anesthesia varies chiefly with the pressure with which the injection is made and to which the intra-spinal pressure had been lowered before the injection is made. He also states that danger does not lie in the extent of the anesthesia; but in the unnecessary delay in the use of Trendelenburg position or the loathness to lower the head promptly because of fear of gravitation of the anesthetic fluid to the brain.

The main contra-indications other than those previously mentioned in this paper as given only recently by Johnson (11) are as follows: Infections at site of puncture, septicemia, decompensated cardiac muscle, Stokes-Adams disease, inordinately high pulse pressure, central nervous system lues, brain tumor or spinal cord lesions, meningitis or turbid spinal fluid. Percy states that any form of heart block is used as a contra-indication in his clinic.

We have employed this type of anesthesia during the past year in over one hundred and twenty-five cases, varying from amputation of one or both legs to practically every type of pelvic and abdominal operation in which this type of anesthesia was not definitely contra-indicated. There was one death which occurred fifteen hours following operation in a female patient who had previously had several attacks of acute heart failure and with electric-cardiographic evidences of coronary

disease. Death in this case was not attributed to the spinal anesthetic given, however, I believe it played some part in production of the cardiac condition causing death in this case. I think that any patient that has previously had an attack of pulmonary edema this type of anesthesia should not be given. It is our opinion that spinal anesthesia has various uses over any other type of general anesthesia in the proper selected cases as enumerated during this paper. We think one using spinal anesthesia should be well acquainted with and know exactly the proper technique and should understand the various complications which may arise during its use. We do not recommend it as a routine and should certainly not be used by the occasional operator.

Simplicity is called for in the use of this type of anesthesia. The technique we have employed very successfully is as follows: Pre-operatively one-half hour before operation the patient is given one-fourth grain of morphine and in the extremely nervous patient two capsules of amytal compound are given the night before and two capsules the following morning two hours before operation. The patient is brought to the operating room blind folded and the ears plugged with cotton. The blood pressure instrument is applied and the pressure recorded after which the patient is placed on his right side with the knees and head brought together arching the spine outward. The puncture is made with a special radio-platinum 22-gauge needle which will bend but not break. Ephederine, one grain, is given intra-muscularly at time of puncture. The site of the puncture is made at the second, third or fourth lumbar inter-spaces in the midline through the intra-spinous ligaments, depending on the height of anesthesia desired. Two c.c. of spinal fluid is allowed to drop into the ampule containing the novocaine crystals which are dissolved and reinjected into the sub-arachnoid space. The factors we have found to control the degree of anesthesia and also the height are as follows: site of puncture, dose of anesthetic drug used, pressure with which injected, and fusion or barbatage with spinal fluid. After the injection is completed a small piece of adhesive is placed over the point of puncture and the patient is placed on his back and immediately given the Trendelenburg position. It has always been our practice to maintain this position for a period of three hours after the patient is returned to his room. Blood pressure readings are taken throughout the operation and should any reaction occur such as sudden fall in pressure and cyanosis, ephederine or adrenalin are immediately given. There is some question as to the necessity of continually taking the blood pressure throughout the operation and some operators and anesthetists have discontinued its use. Personally, I have always depended upon the blood pressure instrument but I see no reason for its use in case the anesthetist has had sufficient experience in observing unfavorable reactions, which may occur with these cases.

We have found one hundred and fifty milligrams of the novocaine crystals a sufficient amount in upper abdominal operations and a hundred milligrams in the mid abdomen, lower abdomen and perineum.

There are other types of anesthetic solutions especially Pipkin's spinocaine which has its own technique and will not be covered in this paper. There are advantages in the use of these solutions as well as disadvantages. The principal advantage claimed with the light solution of spinocaine is that the anesthesia is more controllable. The disadvantage to the heavy solution of spinocaine is that with this solution Trendelenburg position cannot be used.

In conclusion, let me impress upon those of you that are not familiar with this type of anesthesia the absolute satisfaction of results we have obtained in its use. We have not used it as a routine but limit it as well as we can to the cases we feel that it is definitely indicated in. I think the time is not far off until the prejudice against the use of spinal anesthesia will be overcome and it will be accepted as the anesthesia of choice.

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DISCUSSION

DR. D. E. WHITE, El Dorado: I wish to compliment Dr. Smith for this wonderful presentation he has just given us on Spinal Anesthesia.

I think it is one of the best papers and presentations that has ever been on the program of the Arkansas Medical Society, and particularly to be presented by one of the younger members of the Society. Most of the time such a presentation comes from the North or East instead of from some of our own material here in our State.

I am quite a fanatic on this form of anesthesia. I have been using it for almost two years. However, it seems that spinal anesthesia is having a hard struggle to reach and maintain the place it so richly deserves, and all because of either ignorance or indifference towards its use. A short time ago I heard a prominent surgeon state the reason he did not use spinal anesthesia was because he used it one time, quite some time back, and the result was fatal almost immediately after injecting the spinocaine. I asked him concerning the position of his patient at the time of the injection, and he stated that the patient was sitting up. He further stated that the patient died before he was able to get him back in the supine position. Needless to say, to use Spinocaine in this manner is almost homicidal, as the drug is of a lighter specific gravity than the spinal fluid.

The doctor gave us an illustration of a Cesarean Section under spinal. Regarding spinal anesthesia in Cesarean cases, I think it is one of the most satisfactory anesthetics in existence. Within the past week, due to unfortunate circumstances arising, we have had the occasion to do four Cesarean Sections under spinal. All four cases did exceptionally well, and the anesthetic worked perfectly in all four cases. The thing in particular in favor of spinal in these cases is that the child is not so asphyxiated as it is in the various other general anesthetics. It will cry lustily almost immediately after removing it from the uterine cavity. We have been using sodium amytal orally in the preparation of our patients for spinal anesthesia. Trendelenburg position is of paramount importance in this form of anesthesia and most assuredly should always be used whenever spinocaine is used.

We hear different ones, who are not particularly fond of this form of anesthesia, state that spinal anesthesia is alright in selective cases, and usually what they mean by selective cases are the worst cases possible, cases that would probably die under any form of general anesthesia. They select some patient, with one foot in the grave, about 85 or 90 years old, probably with a bad heart and a chronic nephritis. This is what they usually mean by selective cases. Then if this case should die, spinal anesthesia receives another black mark in their opinion, and this is one of the reasons why spinal anesthesia is being robbed of its proper place in our march of progress. If spinal anesthesia is good in such cases, then why is it not good in a perfectly healthy, normal person, such as myself for instance?

The point of puncture is rather immaterial, and in reality the kind of drug selected from the group being generally used over the country is immaterial. We have been using spinocaine according to Pitkin's method. Not that it is any better than some of the others, but at least it is a little more convenient. Some authorities have stated that spinal anesthesia should not be used in any case where the blood pressure is below 100 systolic, and I gave this as a contra-indication in my paper last year in Fort Smith. However, since then I have used it a number of times with the pressure lower than 100 and obtained good results. Within the past few weeks we have operated under spinal one child 7 years of age, one 8 years of age and another 12 years of age, giving 1 cc. of Spinocaine. The anesthetic worked nicely and without deleterious affect in all three cases. I thank you.

DR. H. H. NIEHUSS, El Dorado: I have been using novocaine for the past two years with very satisfactory results. We give hypodermic of H.M.C. No. 1, two hours before and morphine ¼ gr. with atropine 1-150 one hour before operating. We use no local injection preceding the spinal anesthetic. We prefer glucose intravenously for any undue drop in blood pressure following spinal anesthesia. The patient is placed in Trendelenburg position as quickly as possible. We have had no fatalities, so far.

Dr. JOSEPH SHUFFIELD, Little Rock: I was out to see Dr. Smith do some of this work yesterday morning. I have done some fifty cases. Dr. Smith, Sr., mentioned about using a small dosage. I don't know of any one using as small a dosage as he is, but he had absolute relaxation in both cases. He did a prostatectomy of the second stage in an old gentleman about 75 years of age. Then he did an ectopic pregnancy-ruptured, and with perfect relaxation. I believe that is a good point, the smaller size of the dose. I have never used, on a child, less than 150 and use as high as 200. Some writers use as high as 300. I believe the small dosage is an important point and I think I will cut down on mine and see if I can't get just as good results.

We sometimes use adrenalin following it. There have been articles written in the last two or three issues of the A. M. A. journal in which they advise you not to use adrenalin. They say it is contraindicated and you will have more trouble by using adrenalin than not. They suggest the use of ephedrine if you have a drop in blood pressure.

I want to mention the fact that in doing orthoplasties of the hip and knee and in bone reductions and various kinds of severe shocking injuries to the bony system, particularly below the waist line, if you use spinal anesthesia your shock is much less afterwards.

You know the theory of Crile on shock, and this is an absolute block. The patient comes out of the shock much quicker.

DR. J. K. SMITH, Texarkana: I am one of the old men who have seen Dr. De Larp give spinal anesthesia day after day. One thing that he did that we don't do now, which I think illustrates the safety of the anesthesia, is that he sat his patient up. He didn't lay them down in the Trendelenburg position. A few years ago I was down there, I did some amputations in severe cases of diabetes and I sat these patients up. I used cocaine, that's just as safe as any other, except a little more toxic, and those patients go along all right, so that I don't think it makes much difference about the position. "We kept them in a horizontal position," according to these pictures. We did that at the start, but we quit it. Now we put them in the Trendelenburg immediately. So I believe the Trendelenburg has added to the safety.

Another thing is that we do a very little premedication. We don't use sodium amytal except in extreme nervous cases. We go on the theory of having the patient as near normal as possible.

Another thing is the small dosage we use. Our average dose, I believe is 100 m. g. We never use over 150 m.g. in abdominal operations and I believe 100 m.g. will do just as well in our prostatic and amputation cases. In one case where we amputated both limbs we used only 100 m. g. So we figure it is a toxic substance and the less toxic matter you introduce into the system the better off you are and we believe you will find that you can use smaller dosage and will have less effects. We think it is very satisfactory and are delighted with it.

DR. SMITH, in closing: I appreciate the discussion very much. In the beginning we did like everyone else for fear something would happen to the patient. Horizontal position being used entirely during the early stages of the anesthesia as shown in the moving pictures. I think now after our experiences with spinal anesthesia that Trendelenburg position should be used as soon as the spinal anesthetic solution is injected to prevent unfavorable reactions.

Regarding the drugs used, it makes very little difference if properly administered.

Abstracts

ACCESSORY SINUS INFECTION IN SUSPECTED PULMONARY TUBERCULOSIS

John D. Osmond, Cleveland (Journal A. M. A., Dec. 12, 1931), gives the case histories of five patients in whom chronic sinusitis was followed by the appearance of pathologic changes in the lungs. In such cases the clinical symptoms may closely simulate active pulmonary tuberculosis. Rales and elevation of temperature are present. A careful history should prompt a roentgen examination of the sinuses in at least 9 per cent of chest cases examined. Fluoroscopic examination of the chest has very limited differential diagnostic value in determining early tuberculosis and no value in distinguishing early tuberculosis from chronic infection. When a known sinusitis exists, a steroscopic chest study is indicated to determine the degree of pulmonary changes due to chronic infection. These roentgenograms have immense comparative value for later examinations.

DIAGNOSIS AND TREATMENT OF TUBERCULOSIS OF SMALL AND LARGE INTESTINE

Lawrason Brown, Saranac Lake, N. Y., and Homer L. Sampson, Trudeau, N. Y. (Journal A. M. A., Jan. 2, 1932), enumerate the suggestive symptoms of beginning intestinal tuberculosis thus: any digestive disturbances, marked constipation, failure of the pulmonary condition to improve, an irregular temperature with subnormal fluctuations, possibly decrease of pulmonary symptoms while the patient is no better, alternating diarrhea and constipation, and marked nervousness. As symptoms are so often absent and the abdominal and proctoscopic examinations are so often negative, one must turn to the study of the barium meal and enema to roentgen rays to exclude intestinal tuberculosis. The roentgen method of diagnosis reveals the presence only of intestinal ulceration, but, when associated with pulmonary tuberculosis, especially if the pulmonary disease is at all advanced, it is safe to make a diagnosis of intestinal tuberculosis. Heliotherapy, natural or artificial, relieves the symptoms in a large proportion of early cases. In a certain number apparent recovery follows its use. When desired results are not obtained by this method, roentgen or other forms of treatment should be carefully followed. The dietetic treatment, consisting of cod liver oil, 1 ounce (30 cc.), and tomato or orange juice, 4 ounces (120 cc.), ice cold, when taken immediately after meals has apparently cured many cases. Surgical intervention is practiced less frequently now than formerly. The roentgen technic may not reveal the whole extent of the involvement. Patients with advanced pulmonary tuberculosis do not do well under operation and should not be operated on, nor should those with advanced intestinal lesions, except to relieve symptoms. In early localized lesions, excision is the operation of choice, but it may be necessary to short-circuit, which in advanced cases may make the condition and symptoms worse. The establishment of one or two mucous fistulas, from one or both ends of the affected portion of the intestine, may prolong life and help recovery, but is most trying to the patient. Medical treatment, when diarrhea is absent, is of little avail. For diarrhea, drop doses of creosote in a capsule with one-fourth grain (0.016 Gm.) of iodoform, may be tried after meals. Phenyl salicylate and Tully powder (pulvis morphinae comp., consisting of morphine sulphate 0.5 Gm., camphor 9.5 Gm., precipitated chalk 10 Gm. and glycyrrhiza 10 Gm.), 2½ grains (0.16 Gm.) each, every four hours, may have to be resorted to in terminal cases.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorials

LOYALTY AND LEADERSHIP

By D. A. Rhinehart

My contact with physicians in all parts of the State of Arkansas during this year has left me with many favorable impressions of the fine qualities of members of the organization I have the honor of serving. Among the most important of these is the strong feeling of allegiance of physicians to their profession and the organized groups to which they belong. This feeling has been engendered by the history of the profession, its idealism, and its traditions. Frequently this allegiance is associated with a sentiment from which has grown an intense loyalty to the ethical ideals of practitioners of medicine.

Unfortunately loyalty to a profession or to that abstract something known to us by the name of organized medicine is very indefinite. It permits of individual interpretations of the responsibilities that accompany it—this course of action for one man, that type of conduct for another—yet each sincere in his belief that he is doing his full duty to his profession and his fellows. Because of these variations, the full measure of the value of this sentiment of loyalty is lost to us.

That this allegiance and loyalty may be of maximum benefit, they need crystallization and unification. We need to think alike, to follow identical ideals, and to act in unison—moving to attain objectives as a harmonious body. Only through leadership will this be possible—leadership in county, district, and state economic, political, and professional affairs. In this respect, those problems now confronting the medical profession may be blessings in disguise, for they may force a unity of action and a leadership not otherwise attainable.

REPORT OF THE MEETING OF THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

Hotel LaFayette, December 8, 1931

The midwinter meeting of the Council of the Arkansas Medical Society was held in Little Rock on the afternoon of December 8, 1931. The Councilors present were: Drs. Gann, Sr., Archer, Purifoy, Evans, McCaskill, Smith, Wolfermann and John. In addi-

tion, several of the chairmen of the permanent committees of the Society, the president and secretary of the Pulaski County Medical Society, president and secretary of the state society, and Mr. Peter Deisch, attorney for the Society, were present.

The meeting was called to order by Dr. Dewell Gann, Sr., and presided over by Dr. D. A. Rhinehart.

Dr. Bathurst reported for the Program Committee, saying that Dr. Frank Smithies of Chicago, Dr. Hoertzler of Kansas City, Dr. Crossen of St. Louis, Dr. Olmsted of St. Louis and Dr. Martin of Dallas had accepted invitations to be guest speakers at the annual meeting of the Society in April.

Dr. Parmley reported for the Legislative Committee, reviewing the activities of the Committee for this year and emphasizing the importance of the participation of members of the Society in political and other legislative matters. His report was commented on very favorably.

Dr. Dewell Gann, Jr., reported for the Committee on Cancer Control, emphasizing the importance of instruction of physicians in the early recognition of cancerous and precancerous lesions and the early treatment of such conditions.

Dr. McCaskill reported for the Committee on Hospitals, saying that the hospitals have suffered along with all other types of business from the depression and suggesting that the financial status of the hospitals is a subject for serious consideration.

Dr. Dungan reported for the Committee on Publicity. He emphasized the importance of more wholesome information of the public on medical topics and suggested that the members of the Society should be encouraged to give radio talks and prepare articles for the newspapers. He outlined principles to be followed in such publicity campaign. In connection with this report, a letter from the Executive Secretary of the Arkansas Tuberculosis Association was read which outlined the procedure followed by the Association in its publicity campaign. Upon a motion by Dr. McCaskill which was seconded by Dr. Wolfermann, this plan was approved.

The next order of business was consideration of the appeal of the members of the Staff of Trinity Hospital from the action of the Pulaski County Medical Society in censoring them for the solicitation of practice on a contract basis. This appeal was discussed at length, Dr. M. D. Ogden appearing for the Staff of Trinity Hospital. Dr. M. C. John moved to uphold the action of the Pulaski County Medical Society in censoring the members of the Staff of Trinity Hospital—because these men were soliciting practice on a contract basis—and dismiss the appeal. This motion was seconded by Dr. Evans and passed.

Mr. Peter Deisch of Helena, the attorney of the Arkansas Medical Society, was called on by the presiding officer and made one of his delightful and instructive talks.

The council next considered the report of the committee composed of Drs. Smith, McCaskill, and Bathurst which was appointed at the Texarkana meeting to consider the activities of the State Health Department. This report was read by Dr. Smith and was published on page 137 in the December number of the Arkansas Medical Society Journal. Dr. Gann moved that the report be accepted and endorsed, as published, and referred to the House of Delegates. This was seconded by Dr. Purifoy and passed. A motion thanking the committee for its efforts was also passed.

Dr. Rhinehart briefly presented the question of the organization of district medical societies and urged that those districts without such societies undertake the organization of such at the earliest possible time. He also presented the question of the registration of large numbers of eclectic physicians in certain counties of the State, those physicians not being in residence or practicing in those counties. A motion was passed instructing Mr. Deisch to investigate this question and report to the House of Delegates at the next meeting. Dr. Rhinehart also presented the question of the Shoulders Resolution adopted by the House of Delegates of the American Medical Association at the Philadelphia meeting. It was moved by Dr. McCaskill and seconded by Dr. Smith that this question be referred to the Legislative Committee.

The council adjourned to meet in Little Rock during the annual meeting in April.

(Signed) Dewell Gann, Sr.,
Chairman.

S. J. Wolferman,
Secretary.

COMMUNICATION FROM THE STATE BOARD OF HEALTH PREPARED AT ITS MEETING JANUARY 8, 1932

ARKANSAS STATE BOARD OF HEALTH

Little Rock, Ark., January 8, 1932.

Dr. D. A. Rhinehart, President,
Dr. W. R. Bathurst, Secretary, and
Members of the Council of the Arkansas Medical Society.

Gentlemen:

We have just read and discussed the recommendations of your committee regarding the cooperative program with the State Board of Health and desire to inform you and through you the members of the medical profession of the State, that we heartily agree that in order for this Board to project its program most effectively that it must be based on sound principles and in turn must receive the support of the Arkansas Medical Society and the medical profession in general. We have carefully considered your recommendations and feel that there is nothing in your recommendations which cannot be reasonably well harmonized with the opinion and policies of this Board.

We are pleased to note that there is complete agreement on many of the points under discussion, and we assure the Council and the Arkansas Medical Society that it is the policy of this Board to avoid encroachment upon curative medicine and so-called state medicine and every effort will be made to confine its activities to purely preventive measures.

The Board also desires to advise the Arkansas Medical Society through its Council of its eagerness to cooperate with the Council in all matters pertaining to its practices in relationship to organized medicine and public health, and to work with the county societies for the betterment of public health.

The Board deeply appreciated the careful consideration your committee has given to this matter and feels that it will only be a matter of a short time until a complete understanding will obtain and all differences composed. The Board further wishes to express its deep appreciation for the fine support of the Arkansas Medical Society in the years past and expresses the hope that full confidence and cooperation will be re-established at a very early date.

May we respectfully urge in this connection indulgence and tolerance on the part of the medical profession as we attempt to adjust all differences to the end that we may reach a feeling of good will and complete understanding.

Respectfully,

C. W. GARRISON, *Secretary.*

Editorial Clippings

STATE MEDICINE FOR 4,000,000 VETERANS

Following the World War medical specialists were employed on a part time salary basis under the United States Public Health Service to care for disabilities of veterans resulting from service. It was not long before the Veterans' Bureau operated hospitals of its own and used the services of full time physicians in the employ of the Bureau except for certain consultants. It is a question whether the change in policy furnished the veterans with better medical service as a whole.

In 1924 the scope of disabilities cared for by the Veterans' Bureau was extended to include certain specified disabilities irrespective of their service origin. The next step was to provide in 1926 free hospital care for all veterans without regard to the nature or origin of their disabilities. This provision was protested by our national medical organization and various State medical organizations, including our own, as un-American, and physicians were not alone in their objections.

Following this extension of service in 1926 the percentage of non-service disabilities cared for in the veterans' hospitals has increased until in 1930 they comprised a majority of the patients cared for in the 33,128 beds now in existence. According to Dr. Shoulders, the medical council of the Veterans' Bureau estimates that a maximum of 129,859 beds will be needed. This means the continuation of an extensive building program during the next few years to provide about 100,000 additional beds.

To quote from a comprehensive article on the subject by Dr. H. H. Shoulders of Nashville which appeared in the A. M. A. Bulletin for October:

"The average cost of constructing veterans' hospitals is approximately $3,500 per bed. The average cost of the professional staff is $151.56 per year per bed. The cost of maintaining these hospitals in 1930 was $4.42 per bed per day, or $1,613.30 per year per bed. The cost of completing the construction program alone would amount to over $360,000,000. The cost of the professional staff would amount to over $19,000,000 per year, when completed. The cost of maintenance, when completed, would be about $200,000,000 per year. These are not all. The cost of equipment and the cost of transportation of veterans to and from the hospitals cannot be even approximately estimated."

The figures were obtained from the Veterans' Bureau and the estimate of the enormous cost of this hospital building and maintenance program is alarming to taxpayers in general. This cost will be in addition to present appropriations. Private hospitals for the most part erected and operated through generous private contributions and at present about half filled will feel the effect of newly constructed government hospitals, and many will doubtless have to close their doors. More and more veterans will be taken out of the field of private medical practice.

Those who have observed the operation of the present plan of providing hospital benefits to veterans know that the hospital benefits are not and cannot be evenly distributed. Only a very few veterans can live as near a veterans' hospital as a private one. In case of an accident or acute illness requiring prompt surgery the proximity of hospital and surgeon is frequently vital. In certain parts of the less densely populated portions of the country the veteran is hundreds of miles from the nearest government hospital. What is the result? Vital time is lost in reaching the hospital, the long trip is deleterious to eventual recovery, and the patient is better off if he employs the local hospital and physician and pays his expenses himself. Transportation to the nearest government hospital is incidentally a big item of expense to the government and eventually to the taxpayer.

Take a concrete example. A veteran develops a pain in the abdomen. If he lives near enough to a veterans' hospital he seeks relief. Hospitalization is not deemed advisable. By evening the pain becomes unbearable; a private physician is called; the symptoms of acute appendicitis are full blown and immediate operation in a private hospital becomes necessary. Or take an extreme example of a veteran requiring a tonsillectomy. He is advised of the necessity by his private physician. He chooses to have the operation done at government expense. Transportation is provided after more or less delay to the nearest government examiner, who may be miles away. The advisability of operation is determined. Transportation is furnished to the

nearest veterans' hospital, perhaps a day's journey distant. The veteran is detained in the hospital where he can be under supervision until fully recovered and given transportation home. The veteran loses a month in time instead of three days and the performance has cost the government three or four hundred dollars.

Numerous similar instances could be cited.

What remedy is there for the situation?

There is a remedy in the proposition known as the "Shoulders resolution" submitted to the House of Delegates of the A. M. A. at its last session. Instead of continuing the present hospital building plan the proposal in a nutshell provides that each veteran be allowed hospital and disability benefits in case of sickness, which will enable him to select his own local hospital and physician. The case is checked by a representative of the Bureau as at present in insurance cases. This would be to the advantage of the veteran, an economy to the government, a life saver for many private hospitals, and would preserve that fundamental relation between patient and physician which permits the selection of the medical advisor. It is not surprising that in numerous instances where the plan has been explained to groups of veterans it has met hearty approval.—*Minnesota Medicine.*

Personal and News Items

Dr. R. M. Eubanks of Little Rock was recently elected president of the State Board of Health.

Dr. and Mrs. W. L. Hartsell of Warren and Dr. G. A. Warren of Black Rock were recent visitors in Little Rock.

Dr. Howard Rand has taken charge of the Dumas Hospital, succeeding Dr. Alphonso Isom, who has been ill for the past month. Dr. Isom owns the hospital.

We regret to announce the death, December 19, of Dr. Charles Francis Thomas of Fordyce. He had practiced medicine in Fordyce since 1906.

The Pulaski County Medical Society elected the following officers for 1932: President, H. Fay H. Jones; Vice-President, S. C. Fulmer; Secretary, Ernest H. White; Treasurer, William R. Bathurst.

Dr. W. H. Horn and Dr. T. S. Jordan of Taylor have opened a sanitarium in Magnolia. It is a two-story brick building, containing twelve bedrooms, an operating room, reception room and nurses' quarters.

Officers of the Sebastian County Medical Society for 1932 are: President, E. C. Moulton, Fort Smith; Vice-President, B. L. Ware, Greenwood; Secretary, J. W. Amis, Fort Smith; Treasurer, W. R. Brooksher, Jr., Ft. Smith.

Dr. Frank Vinsonhaler, dean of the Arkansas Medical School, has been appointed deputy in Arkansas of the supreme council of the Southern Jurisdiction of Scottish Rite Masons. Dr. Vinsonhaler is a member of Western Star Lodge No. 2, Masons, and has been a member of the Scottish Rite since May, 1897. He was coronated a thirty-third degree inspector general, honorary, in October, 1913.

At the meeting of the Washington County Medical Society January 5, Dr. John M. Wallace, Fayetteville, read a paper entitled "Selling at Cost," and the "Treatment of Fractures of the Skull" was discussed by several members of the Society. There was a large attendance and much interest was shown in the meeting. Drs. Koobs and Harrison of the Benton County Society were guests. Officers for the ensuing year are: President, J. W. Walker, Fayetteville; Vice-President, Alfred Hathcock, Fayetteville; Secretary-Treasurer, Fount Richardson, Fayetteville.

Dr. Utley of Cabot inaugurated a unique method of charging off many of his unpaid balances. Particularly in the Camp Ground and Oak Grove districts the unsurfaced roads have been so bad since the late rains that no one has been able to get over them in a car. Dr. Utley notified his patients in these neighborhoods that he would be pleased to credit them with $4 a day for every day they devoted to hauling stones and dumping them in the low and impassable places in the roads.

His offer stimulated road work in this vicinity and as many as 17 men a day worked with teams to improve the roads.

Dr. Utley says that he has over 100 families unable to pay their account this year.

At a meeting of ex-presidents of the Arkansas Medical Society held at the Texarkana meeting of the State Society, April 21, 22, 23, 1931, the following resolution was adopted.

We, the past presidents of the Arkansas Medical Society having the best interests of our Society deeply graven on our hearts and not being desirous of losing that interest or being considered passe, but, on the contrary being most anxious to continue our interest and personal contact with all those affairs affecting its welfare, do hereby constitute ourselves into an ex-officio committee, The Past Presidents of the Arkansas Medical Society, meeting annually with the Society.

We desire at once to disavow all partisan or political motives.

It shall be our aim to induce all past presidents, who can possibly do so, to attend each annual meeting and dine together at least once each session.

We propose to discuss freely all questions affecting the society as a whole, to inaugurate and champion policies deemed advantageous to the Society and, when possible, make known our conclusions in open meetings of the Society.

It may readily be conceded that these meetings may be of more service to the past presidents, individually, than to the Society at large, however, if their several interests may thus be cemented and co-operated both the Society and the individual may be benefited.

This we consider as sufficient excuse for an annual foregathering of the past presidents of the Arkansas Medical Society.

On the last day of the House of Delegates, the following resolution was presented by Dr. C. A. Archer, delegate from Sevier County:

Be it resolved that the By-Laws of this Society be amended to include all ex-presidents as active delegates and that they may be allowed to vote on all questions except the election of officers.

President Barlow announced that the resolution would be held over and voted on at the 1932 session.

SCIENTIFIC EXHIBIT FOR THE ANNUAL STATE MEETING

The Committee on Scientific Exhibit is very anxious that this feature be fully developed at the annual meeting. A great many physicians own interesting pathological or anatomical specimens. Some have devised new instruments or new methods of treatment. Any one having such items is urged to communicate with the chairman or any member of the committee. Specimens may be sent to Dr. William E. Gray, Jr., 801 Donaghey Bldg., Little Rock, who will give the proper care and space for the exhibit.

Specimens may be brought personally by the owner, but applications for space should be made at least one month before the meeting.

It is hoped there will be a large response to this request, so that the exhibit will be of great educational value.

H. Moulton, *Chairman.*

INDISCRIMINATE CONTRACT PRACTICE*

The American Medical Association, through its Judicial Council and through its House of Delegates, has on more than one occasion condemned indiscriminate contract practice as being unethical and as being detrimental to the public welfare. In similar manner in resolutions adopted by the House of Delegates, the Association has recorded itself as opposed to the practice of medicine by departments of public health.

Principles of Medical Ethics of the A. M. A.:

Sec. 2, p. 19—It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession.

The Judicial Council has taken the position that contract practice is not *per se* unethical but that every contract must be judged on its own merits.

The component county medical society has original jurisdiction with respect to the conduct of its own members in entering into undesirable contracts. Jurisdiction lies next in the constituent state medical association concerned.

**Editorial printed in the October, 1931, issue. Reprinted by request.*

MID-SOUTH POST-GRADUATE ASSEMBLY SUCCEEDS TRI-STATES MEDICAL ASSOCIATION

With distinguished lecturers and essayists on the program and students of medicine from all parts of the South, Southwest and some States in the North, in attendance, the Mid-South Post Graduate Assembly at its convention in Memphis, February 9-12, will at once take its place as one of the most important medical bodies in the country. The Assembly is successor to the Tri-States Medical Association which, after 47 years of growth, progress and service, outgrew both its name and its original territory.

Organized by a group of doctors of Mississippi, Tennessee and Arkansas, the Tri-States Medical Association has held its annual conventions in Memphis, bringing an ever increasing number of doctors and students of medicine from a constantly growing territory. At the convention last February it was agreed that the time had come to expand the membership of the Association to include the entire South, and to adopt the present name, Mid-South Post Graduate Assembly.

The Assembly inherits the ideals and prestige of the Tri-States Association and in many respects will adhere to the policy which has proved alike successful and popular. Speakers on the program are distinguished doctors from all parts of the country, drawn from outside the membership. They are chosen because they are nationally known authorities in their several fields.

REPORT OF THE DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

To the House of Delegates, Arkansas Medical Society:

Gentlemen:

Your delegate to the annual meeting of the American Medical Association wishes to make the following report:

The eighty-second annual meeting was held at Philadelphia, with attendance exceeding that of any previous session.

The clinical lecture program which takes place on the first two days of the annual session was attended regularly by a changing audience of one thousand listeners. Here eminent clinicians discussed problems of recent interest in scientific medicine and concerned themselves particularly with the clinical application of such knowledge. Thus special emphasis was laid in the Philadelphia session on the treatment of disorders affecting the blood, on fungus infection of the skin, on syphilis, on deficiency diseases, on arthritis, on infantile paralysis and on diabetes. These clinical lectures constituted a veritable post-graduate course in practical medicine. Their increasing popularity testifies to the fact that they meet a definite need.

Among the most important discussions in the House of Delegates pertained to Medical and War Veterans' Legislation, Amendments to the Volstead Act and Issuing Opinions on Public Policy. On the latter subject the following resolution was adopted:

WHEREAS, The American Medical Association, through its county and State organizations and through its House of Delegates, affords to each of its members representation whereby he may express his views, and, if approved, receive the support of organized medicine; and,

WHEREAS, The American Medical Association is the largest body of physicians in the United States, representing every specialty, democratically organized, and including more than 100,000 physicians; and,

WHEREAS, From time to time, members of the American Medical Association, holding membership in various medical societies, organized for scientific advancement, have initiated in such bodies resolutions defining medical policies and opinions on questions of medical economics and social relations; and,

WHEREAS, Resolutions on such subjects adopted by such organizations are given wide publicity as representing the views of the American medical profession, notwithstanding the fact that such bodies are of limited membership and specialistic interest; therefore be it

RESOLVED, That the House of Delegates of the American Medical Association urge all members of the Association to initiate such resolutions in their county or State societies or in the House of Delegates of the American Medical Association, and that an effort be made, through the periodicals of the Association, to inform the membership, and also all organs of public expression, that the American Medical Association is the one body, in organized medicine, entitled to speak for the vast majority of the physicians of this country.

Also of major importance was the resolution presented by Dr. Shoulders, as follows:

WHEREAS, The Federal Government has inaugurated the policy of rendering medical and hospital benefits to veterans of the World War with non-service connected disabilities; and

WHEREAS, This policy was inaugurated over the opposition of the American Medical Association; and

WHEREAS, The policy now in force, if carried to its logical conclusion, involves the construction, the staffing, and the maintenance of a sufficient number of hospitals to accommodate the hospital needs of all the veterans of the World War; and

WHEREAS, Such a policy places the Federal Government in unnecessary and unjust competition with the civilian hospitals and the medical profession of the United States; and

WHEREAS, The present policy is of unequal benefit to veterans by reason of the fact that many disabled veterans cannot (for one reason or another) avail themselves of the benefit; therefore be it

RESOLVED, That the House of Delegates of the American Medical Association petition the Congress of the United States and the American Legion to abandon the policy of rendering hospital and medical benefits to veterans of the World War with non-service connected disability, and substitute therefore a plan of disability insurance benefits with the following provisions:

First, the creation of a Bureau of Disability insurance in the Veterans' Bureaus as now constituted.

Second, the issuance of a disability insurance policy to each veteran with a disability benefit clause, as follows:

(a) The payment of a weekly cash benefit during a period of total disability, and

(b) The payment of liberal hospital benefit sufficient to cover the hospital expenses of a veteran during a period of hospitalization for any disability. Such benefits to be paid to a veteran on satisfactory proof of total disability, and

(c) Such other provisions as are necessary for the proper administration of the act.

Be it further

RESOLVED, That the proper officers of this association be instructed to approach the officers of the American Legion with the view to securing the adoption of the policy above set out as a part of the legislative program of the American Legion, and be it further

RESOLVED, That each State medical association be requested to form a committee whose duty it will be to approach the State and local Legion posts throughout the country with a view to securing the adoption of this program by them.

Dr. E. H. Cary of Dallas, Texas, was named president-elect, without opposition.

New Orleans was selected as the next place of meeting, May 9-13.

Respectfully submitted,

E. F. Ellis, Fayetteville.

Auxiliary Notes

The Woman's Auxiliary to the Pulaski County Medical Society met December 8, 1931, at the home of Mrs. Wm. A. Snodgrass, Jr., with Mrs. Pat Murphey, Mrs. C. C. Reed and Mrs. O. A. Carruth, assistant hostesses. Mrs. D. A. Rhinehart, president, presided. All standing committees made reports after which Mrs. Anderson Watkins gave a detailed report of the meeting of the Woman's Auxiliary to the Southern Medical Association, at New Orleans, November 17-20. Forty members were present.

An informal meeting of the Woman's Auxiliary to the Faulkner County Medical Society was held at the home of Mrs. Marcus T. Smith, December 17, 1931. Mrs. J. S. Westerfield, president, prepared a program of appropriate readings, given by Miss Corine Hilliard and piano numbers by Miss Anna Louise Sims. An interesting letter from Mrs. W. R. Brooksher, Jr., State president, was read.

Members of the Woman's Auxiliary to the Miller-Bowie Counties Medical Society assembled informally at dinner Tuesday, December 1, 1931, at the McCartney Hotel. The occasion centered about Mrs. Walter McNab Miller who gave the principal points in her work, which formed the inspiration for a round table discussion on topics of mutual interest. Covers were laid for Mrs. Miller, Miss Nancy Pettus, Mrs. Fannie DeLoach, Mrs. Albert Mann, Dr. and Mrs. S. A. Collum, Dr. and Mrs. William Hibbetts, Dr. and Mrs. C. E. Kitchens, Dr. and Mrs. Harry Murry, Dr. and Mrs. Preston Hunt, Dr. and Mrs. Albert Collum, Dr. and Mrs. L. J. Kosminsky and Judge and Mrs. R. B. Levy.

December 15, 1931, a business meeting was held at the home of Mrs. L. J. Kosminsky. Bottled shaped invitations were sent to the members, announcing that a "Convalescent party" would be held with nurses, Mrs. Kosminsky, Mrs. R. R. Kirkpatrick and Mrs. J. T. Roberson, in charge. The hostesses, wearing uniforms, received the guests. The story of anesthesia was given by Miss Graham of the Texarkana hospital. Mrs. Kosminsky presided over the business session. Donations to the Milk and Student Loan Fund were received. Refreshments were served on gay hospital trays, decorated with flowers and articles connected with hospital life.

Obituary

HIGGINS, JAMES H.—Dr. J. H. Higgins of Altus, aged 60, died October 16, 1931. Death was due to cardio-vascular renal disease.

CHAPMAN, ARCH SYLVESTER—Dr. A. S. Chapman of Fort Smith, aged 46, died December 22, 1931. He practiced medicine in Mammoth Spring before going to Fort Smith. He is survived by his wife and an infant son.

GRAY, WILLIAM EDWARD—Dr. W. E. Gray, Little Rock, aged 54, died January 10, 1932. He was well known in Little Rock, where he had practiced medicine since his graduation in 1919.

Dr. Gray is survived by his widow, two sons, Dr. W. E. Gray, Jr., and Edwin Frederick Gray, and his mother, Mrs. Isabella Gray, all of Little Rock, and one brother, James A. Gray of Atchinson, Kansas.

KIRKHAM, ZILLIBA L.—Dr. Z. L. Kirkham, Little Rock, aged 64, died December 29, 1931. He was a native of Okolona, Clark County, and had practiced there during his entire medical career until four years ago when he removed to Little Rock. He was graduated from the University of Louisville, School of Medicine, Louisville, Kentucky, in 1895.

Dr. Kirkham is survived by his wife; a son, Sam Hayes Kirkham, and three sisters, Mrs. Zona Shannon of El Paso, Texas, Mrs. G. A. Bird of Kauffman, Texas, and Mrs. Addie Peoples of Okolona.

JONES, WILLIAM ENOCH—Dr. W. E. Jones, Little Rock, aged 62, died December 25, 1931. He was born at Jasper, Newton County, July 6, 1869. He attended the public schools at Greenwood, Sebastian County and the Medical School of the University of Arkansas, from which he graduated in 1896. He took postgraduate work at Tulane University in 1904 and 1911.

Dr. Jones first practiced medicine at Charleston, Franklin County, but moved to Poteau, Okla., in 1897, where he was division surgeon for the Kansas City Southern railroad, and medical examiner for a United States government board from 1904 to 1907.

He joined the army as a lieutenant in the Medical Corps in 1918 and served on the Medical Examining Board at Camp Forest, Georgia, until a month after the armistice. He established his residence in Little Rock in that year and has been active in professional and civic affairs in that city. He was a past-president of the Pulaski County Medical Society.

Surviving are his wife, formerly Miss Annie Phoebe East; two sons, W. Everett Jones and Dr. H. Fay H. Jones, both of Little Rock; and two daughters, Miss Helen Lucile Jones, Little Rock and Mrs. Gordon Thomasson, Magazine.

County Societies

FRANKLIN COUNTY

(Reported by Thos. Douglass, Sec.)

The Franklin County Medical Society entertained with a dinner at the Bristow Hotel December 15, 1931. Every member of the society was present and the following guests: Drs. Rhinehart and Fulmer of Little Rock; Drs. Foster, Blair, Wolfermann, Billingsley, Krock, Dorsey, H. H. Smith, H. and E. C. Moulton, Folts and Brooksher of Fort Smith; Dr. Fuller of Magazine; Wigley, Grant and Kirksey of Mulberry; Earle Hunt, Boen and Kolb of Clarksville.

Dr. Rhinehart, President of the Arkansas Medical Society, gave an address and Dr. Fulmer talked interestingly and instructively on Childhood Tuberculosis.

JEFFERSON COUNTY

(Reported by W. G. Pittman, Sec.)

The Jefferson County Medical Society met in regular session, January 5, 1932, at Pine Bluff, with the following members present: Capel, Clark, Crump, Gill, Higginbotham, Hughes, John, Lowe, Palmer, Simmons, Spillyards, Shelton, Lemons and Pittman. Visitors were: Alan G. Cazort, D. A. Rhinehart, L. V. Parmley, Martin C. Hawkins, Little Rock; A. M. Gibbs, Hamburg; G. C. Wood, Grady;

C. W. Dixon, Gould; H. T. Smith, McGehee; J. S. Wilson, Monticello and B. A. Wilkes, St. Louis, Mo.

Minutes of the previous meeting were read and adopted.

On account of no previously arranged scientific program, the meeting was for discussion by President Capel.

Dr. Wilkes delivered an interesting address on the hospital, its management and success, and the necessity of mutual cooperation by the attending physicians. Also, some constructive suggestions were offered by Mr. T. J. McGinty, the newly appointed superintendent of the Davis Hospital, all of which were received with enthusiasm and approval.

Following this came the problem of organizing a Fourth Councilor District Medical Society, which had as its first speakers Drs. D. A. Rhinehart and H. T. Smith, who pointed out the valuable benefits to the physician of organized medicine. Special emphasis was laid on local organizations, and active participation therein by all doctors in good standing.

It was ably discussed by Drs. Lemons, Wilson, Palmer, Dixon, Gibbs, Cazort and Parmley. After which, the proposed organization had unanimous approval, and from Dr. John came a motion, seconded by Dr. Dixon, that Dr. J. S. Wilson be elected its president. No other candidates were nominated, and Dr. Wilson was elected by acclamation.

Other officers elected were: Dr. W. T. Lowe, secretary-treasurer, and Dr. H. T. Smith, vice-president.

Monticello was selected as the place of the first meeting, and the time is the first Tuesday in March, or March 1st.

It is hereby understood that all physicians in this, the Fourth Councilor District, are eligible to membership, provided they are in good standing in the State Society.

A scientific program will be arranged by the secretary for the March meeting.

After having accomplished the organization, and having experienced possibly the most enthusiastic and interesting non-scientific program, the society was adjourned by President Capel.

Book Reviews

Surgical Diagnosis, Volume III and Separate Index Volume, completing the new work by forty-two American authors. Edited by Evarts Ambrose Graham, M. D., Professor of Surgery, Washington University Medical School. Three octavo volumes, totalling 2,750 pages, containing 1,250 illustrations, and Separate Index Volume. Published by W. B. Saunders Company, Philadelphia. Cloth, $35.00 a set.

Space does not permit deserved review on this splendid volume, but the table of contents shows 15 of our most prominent surgeons.

The book closes with a chapter by Dr. Lawrence D. Thompson, of Washington University School of Medicine on "The Schilling Differential Blood Count as an Aid in Surgical Diagnosis." He says, "In pyogenic infections the following pictures may be indicative of the degree of severity of the process:

1. A mild infection may be accompanied by a slight increase in the total white blood count and a slight shift to the left (increase in stab form)—the lymphocytes remaining nearly normal and the eosinophiles normal.

2. A moderate infection may be characterized by more marked increase in total white blood cell count. Shift to left more marked —presence of young forms. Diminished number of lymphocytes and eosinophiles.

3. In severe infections there is reduction in the red blood cells. Total white blood cell count is increased. The shift to the left is very marked—myelocytes are present and lymphocytes are reduced; eosinophiles are absent.

4. In very severe infection there is marked reduction of red blood cells and total white blood cell count decreased; still greater shift to the left. Lymphocytes greatly reduced and eosinophiles absent.

In general then, an increase in the degree of shift to the left, a decrease in lymphocytes and eosinophiles, total white blood cell count first increasing and then decreasing with progressive destruction of red blood cell count, indicate increasing severity of infection with a progressingly unfavorable prognosis. A decrease in the degree of shift to the left, the return of lymphocytes to normal and the reappearance of eosinophiles indicate a favorable reaction with good prognosis.

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Original Articles

CROSS-EYE*

K. W. COSGROVE, M. D., F. A. C. S.,
Little Rock

In selecting this subject to discuss today, I have done it with the hope that, through it, some eyes may be saved that, by neglect, would have resulted in permanent impairment of vision.

Convergent strabismus may be divided into three major causes. In the order of their occurrence and importance, they are:

(1) Hyperopia, or far-sightedness.
(2) Lack of fusion faculty; and,
(3) Paralysis of the sixth nerve.

We will not discuss the latter at all in this paper.

Cross-eyes in Arkansas are not a rarity. We find approximately one per cent of school children with this complaint. Figures from eight counties of Arkansas, obtained from county health records, show that in forty thousand four hundred seventeen (40,417) children examined, four hundred forty (440) were cross-eyed. From the figures, it is evident that the majority of cases in these counties are being neglected as only twenty per cent of cross-eyed children were wearing glasses.

The act of accommodation is closely linked with the act of convergence, which is readily understood by attempting to see one's finger six inches from the eyes, in which it is necessary to converge thirty to forty degrees to prevent double vision. If a child is markedly far-sighted, accommodation which would equal the normal accommodation for six inches is necessary for ordinary vision. Accompanying this accommodation would be the similar amount of convergence. The prism degrees of convergence are three times the diopters of accommodation. Therefore, if a child has five degrees of hyperopia, he has to accommodate for average vision this much and would, if not corrected, have a convergence of fifteen degrees. It is necessary then for the child to disregard the object from the weaker eye to prevent double vision, which results in a secondary deviation of a greater degree. The primary deviation is always in both eyes. It is when the weaker eye is discarded that amblyopia occurs, with its resulting loss of vision, which is permanent unless restored before the fifth or sixth year.

Donders (1), who, so far as the anomalies of refraction are concerned, brought order out of chaos, was the first to recognize the intimate dependence of convergent strabismus upon hypermetropia. He, of course, realized that hyperopia is a far more common condition than convergent squint and explained this fact in a thoroughly satisfactory manner.

The desire for binocular vision and the abhorrence of diplopia, he tells us, suffice to prevent the occurrence of squint in the great majority of cases. However, exceptionally energetic accommodative power or congenital weakness of the external recti muscles or differences in the visional accuity of the two eyes will bring on a squint in the presence of hyperopia.

A fairly definite method should be outlined for the investigation as to the type of any squint. These will include a careful history as to the age of onset, the mode of onset. Determination of the character of the squint, whether unilateral or alternating, the power of fusion in the deviating eye, should be tested, and the movements of each eye separately. A careful check on the exact vision of each eye for distance is essential. Probably one of the most important investigations is the examination to determine the condition of the fusion faculty. This is most simply done by placing a red glass before one eye. If fusion is possible, a white light only will be seen.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

It is sometimes necessary to use a prism in addition to the red light to overcome the deviation of the eye. Of course, examination with the amblyoscope is the most precise and reliable method.

The treatment of a case with good fusion faculty but highly hyperopic should commence at the earliest date at which the convergence is noticed. Children as young as three months of age can be very satisfactorily fitted to glasses. Of course, the mother will throw up her hands in alarm at the suggestion. However, it is remarkable how quickly the baby becomes accustomed to the glasses and cries when it does not have them on. A child taken at this age and the hyperopia corrected, with a normal fusion center, will seldom have to have a muscle operation. The management of a case seen first around the ages of three or four years depends entirely upon the results obtained from correction of the hyperopia. In a large number of these cases, correction of the strabismus is obtained by refraction alone. However, if correction is not obtained before the fifth year, a muscle operation should be performed. In making this statement, I may run counter to the opinions of some men. I will, therefore, give my reasons. The fusion center, if not developed before the age of five or six years, is seldom, if ever, developed and will be developed more readily if the eyes are placed in a parallel plane. Secondly, an eye left unused past this age will be amblyopic and will never develop normal vision.

Therefore, as previously stated, in the treatment of this condition, it is most important to get the child at an early age. This can only be done by educating the family doctor and the public not to wait until the child is ready for school. It should be impressed upon the parents that they must carefully carry out all the directions given them. Too often, the parents lose hope when they do not see immediate results. It is also advisable in these cases to remedy any physical defect of the child as a weak or sickly one does not respond well to treatment.

A few words regarding the selection of the type of operation: The fact that the original convergence was bilateral makes it imperative in severe cases to do a bilateral tenotomy of the internal rectus. However, simple tenotomy should never be relied upon without advancement of the external rectus of the converging eye. This should be done because of the stretched out and weakened condition of this muscle. In the cases under thirty degrees, tenotomy of the internal rectus, with advancement of the external on the converging eye only, is usually satisfactory. The long period of confinement with both eyes covered, which often is forced upon the patient, is, in my estimation, unnecessary. The post-operative care should consist of twenty-four hours with both eyes bandaged. Following this with the pupils dilated, use of the eyes may be permitted. The pupils are kept dilated for three or four weeks. Before the dilatation is permitted to disappear, the eyes are refracted and full correction given.

One of the common occurrences in an ophthalmologist's office is to see a girl or boy in their teens with one eye converging, nervous, and with an inferiority complex, whose vision in one eye is only for large objects. These cases, of course, can only be helped from the standpoint of appearance. Vision can never be restored in the converging eye. However, the eyes should be straightened and will greatly improve the patient from a nervous standpoint.

We have then a smaller group of convergent squints caused by loss of fusion center. According to Alexander Duane (2), the great majority of persons, when viewing an object with both eyes, exhibit what we call binocular fusion and binocular single vision; that is, both eyes are directed sharply at the object, and both simultaneously see it. The vision of each eye separately and the conjugation of the two eyes in vertical movements is fairly well developed in the infant at birth. The conjugation of the eyes for horizontal movements is perfected within the first few months of life. Between five and six months, one finds the first certain evidence of the desire for binocular vision, though probably a certain degree of binocular vision is present at a much earlier period. Any child under one year, if a prism is placed in front of the eye, will not see double but will suppress the vision of one eye.

If the fusion faculty is not developed in the first five months of life, a convergent strabismus will result. This lack of development may be caused by some general debilitating disease but is probably more frequently caused by a marked difference in the refraction of the two eyes. If the fusion faculty is not de-

veloped by the fifth or sixth year, it very seldom develops to the extent that diplopia is not noticed if the eyes are straightened.

This type of case is recognized by the fact that there is not a high degree of hyperopia present or that there is a marked difference in the refraction of the two eyes. The handling of these cases must be along slightly different lines than to the cases caused by hyperopia alone. A careful refraction is very essential and, in some cases, is all that is necessary; however, fusion training should be carried out. The training of the fusion sense is usually not possible before the age of three years. In children under three years this treatment is apt to be rather difficult. After five years of age, the fusion training takes much longer and is seldom successful. Fusion training in the young child must be made attractive and interesting, for the child will not follow the directions given unless they are. Probably one of the easiest methods is the amblyoscope, in which is used on one side a cage and on the other side a bird. The child is then playing a game to attempt to get the bird in the cage. The cage should be placed before the good eye. At the first attempt, the child will probably not see the bird. The angle of the amblyoscope is increased, and the child requested to look for the bird and, after he finds it, to attempt to get the bird in the cage. This can be accomplished without the amblyoscope by the use of an ordinary stereoscope, in which the two pictures can be moved away from one another or closer at will. All that can be accomplished in the very young child is done by the proper refraction. The use of atropine or a bandage to cover the good eye in this type of case only tends to decrease the fusion ability. Operations on cases with loss of fusion faculty will not correct unless followed by careful practice in developing binocular vision.

In concluding, I would like to quote Charles P. Small (3), Professor of Ophthalmology, Chicago Policlinic. He makes the following statement: "Ophthalmologists recognize the importance of this early treatment of strabismus. Many parents, naturally, go to their family physicians in these cases before consulting an oculist. Physicians who advise the parents: 'Wait until the child is older, and he will probably outgrow it,' should learn that they are guilty of criminal ignorance."

1. The Anomalies of Accommodation and Refraction of the Eye. Page 294 et seq.

2. New York State, Journal of Medicine. May 15, 1927.

3. Eye, Ear, Nose and Throat Year Book, 1929. Page 63.

DISCUSSION

DR. HOMER SCOTT, Little Rock: I would like to ask the doctor after he has fitted the little patient with glasses how often it should be re-examined or refitted?

DR. J. A. FOLTZ, Fort Smith: How do you go about fitting a three months' old child with glasses?

DR. COSGROVE, in response: It is sometimes quite difficult to fit a three months' old child for glasses. They can't tell you what they see. It is done entirely by the retinoscope. The pupils are dilated with atropine or other midriatic over a period of three or four days. Then we have complete relaxation of the ciliary muscle. The physics of refraction I don't think you want me to go into, but we carry our retinoscopy to the point where the shadow stops. That is our refraction with an added one diopter minus. The ophthalmologists understand what I am talking about. We can't tell that the child can see with that refraction but we know from experience that is the true refraction of a child and we fully correct them. We don't attempt to give them glasses with which they can see best. That glass probably would be less than their full correction, but with their marked degree of hyperopia we feel it is better to fully correct them.

As to the question of re-examinations, a growing child's eyes will change more rapidly probably between the ages of one and twenty than from twenty on. I believe the youngster should be examined every six or nine months. The growth of the eye with the changes in the size change the refraction. I would say that six to nine months would be the longest time to let them go without a re-examination.

VACCINE AND SERUM TREATMENT OF UNDULANT FEVER*

Francis J. Scully, M. D.
Hot Springs National Park

Since undulant fever has been recognized more frequently and has been found so generally distributed throughout the country, many reports have been published showing the effects of various bacterial products and vaccines in the treatment. As undulant fever and malta fever have been shown to be practically indentical by the work of Evans (1), Meyer (2), and Keefer (3), the reports on vaccine treatment in malta fever have also been reviewed.

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

Vastellani and Taylor (4) were among the first to employ vaccine in the treatment of malta fever. They used a vaccine prepared from Brucella melitensis alone and also in combination with typhoid and para-typhoid bacilli. DeFinis (5) in 1923 reported fifty-five recoveries in fifty-five cases, in many instances after one injection. Khaled (6) found marked improvement in three cases in which a vaccine of Brucella abortus was employed. Schneider (7) reported one hundred and seventy-four cases of malta fever in which eighty-four per cent were cured by vaccine. The vaccine was given repeatedly and continued for a month after the fever had subsided.

In France a group of investigators have been using vaccines in undulant fever with promising results. Courtois-Suffit and Liege (8) treated a case with an endoprotein prepared from Brucella abortus. The vaccine was given intravenously with a gradual drop in temperature to normal. Giuffre (9) reported good results in all but one case in his series. He recommended the intravenous use of .2 cc. of vaccine which produced a marked reaction. There was chilling, rapid pulse, low blood pressure, and a rise of temperature to 104-107. He does not state how many cases were treated in this manner. Cambessedes and Cochez (10) reported a single case with recovery following the intravenous injection of abortus globulin. The case was already six months old and they suggested that this type of shock treatment should be tried in these long drawn out cases. Liege and Casteran (11) had complete recovery in one case from a single injection of an endoprotein preparation of Brucella abortus. They also gave twenty minims of Adrenalin at the same time as the vaccine was given and felt that it modified the shock reaction which occurred. Toullee and Blanchard (12) also reported recovery in one case with the same preparation. Cazalas (13) used an intramuscular injection of a filtrate from a fifteen day old bouillon culture of Brucella melitensis, which was followed by subcutaneous injections of antimelitococcus vaccine. Cambessedes and Garnier (14) used a vaccine prepared from Brucella abortus and reported fourteen cases cured after one injection, ten cases required two or more injections, and five cases in which one injection was given, but no further injections were permitted.

More recently Angle (15) reported ten cases in which recovery took place after the use of a stock vaccine made from mixed bovine and swine strains which was given intramuscularly. One case showed a relapse after five weeks and was given an additional course of vaccine with recovery. Wendt (16) reported three cases with recovery and believed that the vaccine treatment gave more favorable results than other types of treatment. Schilling, Magee, and Leitch (17) report a case in which an autogenous vaccine was made from a Brucellus suis strain prepared from the patient's blood. They prepared a highly concentrated vaccine by alternate freezing with compressed carbon dioxid and rapid thawing. The process was repeated five times and resulted in finely disrupted bacterial bodies without altering the character of the protein.

Laevell (18) used an autogenous vaccine in two cases without permanent improvement, and Todd (19) reported no apparent effect from an autogenous vaccine in one case.

Non-specific protein therapy has been used with improvement. Budtz-Olsen (20) employed typhoid vaccine in ten cases. He used it intramuscularly and found that in four of the cases the fever disappeared after the first series of injections. Two other cases required a second series of injections. In one case there was no effect and another had a recurrence later. Two cases gave uncertain results as the patients were afebrile at the time the vaccine was given. Awe and Palmer (21) used injections of milk in three cases with recovery.

While these reports give results that are generally favorable from the use of vaccine, most reports make no mention of control cases and many have reported a single case only. Those who have reported the most striking results are the ones who have had a marked reaction following the use of the vaccine preparation. In fact, Cambessedes and Garnier believed that it was necessary to have a very definite reaction to get results. It seems that the size of the dose of bacterial substance injected bears an important relationship to the final result. Vaccines given in small doses and gradually increased, as has generally been the custom, gave no particularly favorable results, but when the vaccine was given in larger doses, as reported by Angle and the French investigators, the results were better. Cambessedes and Garnier used an intrader-

mal injection of .1 cc. of the vaccine to determine the sensitiveness of the individual and regulated the dose of the injection from the degree of the skin reaction. They were convinced that unless there was a strong local reaction, injections of the vaccine would not prove effective.

There is some question whether the results are due to ordinary protein shock or are due to a specific action of the vaccine. While the injection of endoprotein may act in part by ordinary protein shock because of the nucleoprotein which it contains, Liege and Casteran thought that the cure was the result of conflict between the sensitized organism and the inoculated antigen, basing this on the fact that larger doses of vaccine given to normal individuals gave no reaction. They believed that there was an element of specific shock in the reaction rather than ordinary foreign protein shock. Biering (22) saw little hope in the use of vaccine because of the high agglutination titer already present in this condition. Schilling also felt that the sudden character of the cure could scarcely be explained by the moderate increase in the antibodies as shown by an increase in the agglutination titer. He felt that the general response provoked by the vaccine accelerated the defense forces of the body and accounted for the overwhelming of the infection. This is what we would expect with a foreign protein reaction, though the autogenous vaccines may have some specific effect as well. This is in agreement with the view of Teissier, Reilly, and Rivaller (23) who state that the reaction from the vaccine is evidently of a specific nature, but is comparable to ordinary protein shock, the specific effect from the antigen being shown by the increase in agglutinative power.

Case Report

A woman, age twenty-eight, was seen July 10, 1929. She had not been well for several months, complaining of easy exhaustion, aching in the back, and general nervousness. She was without much appetite and had lost considerable weight. She had been using considerable milk as a building food and within the last few weeks she developed temperature, ranging from 99 to 99.6. When the fever was highest there was marked aching in the lower spine.

Physical examination showed the temperature 99.2; pulse, 90; blood pressure, 112-64. The heart and lungs were normal. The laboratory examination showed 4,600,000 red cells, 10,800 white cells, and 90 per cent hemoglobin. A stained smear showed an occasional small ring-form of estivo-autumnal malaria. The urine specimen was negative. The Wassermann and Widal negative.

On account of a history of a possible tubercular infection in 1922, an X-ray was made of the chest which showed the lungs normal.

On account of the finding of the malarial parasite, she was given quinine which was continued for a period of six weeks without much effect on the temperature. It was then discontinued and she was given salicylates, which gave relief from the aching in the back, but did not influence the temperature very much, which continued to range from 99 to 100 in the afternoon. It was accompanied by marked sweating. At times she would have to change her clothes three to four times during the day.

In January, 1930, an agglutination test for undulant fever was positive in 1:320. A blood culture was made to see if an autogenous vaccine could be prepared, but it showed no growth. On March 5th, she was given 50 cc. of Antimelitensis Serum (Mulford) intravenously without reaction. This is a polyvalent serum made from immunizing cattle to Brucella melitensis and Brucella abortus. There was considerably less temperature for three weeks and less aching and sweating. This was followed by a gradual rise of the temperature again and on April 29th, a stock vaccine made from Brucella abortus was given, starting with .2 cc. and increasing gradually with each dose. It was repeated at three to four days intervals and continued until July 7th. The patient was more comfortable during this period. There was some local reaction from the injection and a short and mild febrile reaction, after which the temperature would be normal for twenty-four to forty-eight hours.

In September there was a return of the marked sweats and increased temperature, and on October 2nd, a second injection of the antimelitensis serum was given. This was followed by aching the next day and more severe aching on the eighth day following. The temperature ranged a little lower and did not exceed 99. On November 13th, another injection was given with a marked shock reaction following. There was nausea, a feeling of

tightness in the chest, and marked flushing of the neck. The patient was given atropin with some relief, but did not feel well for several days afterwards. The temperature, however, dropped to normal, but there was a return of aching in December. On January 20th, she was given only 10 cc. of this serum on account of the severe reaction which the full dose of 50 cc. of serum gave in November. This was followed by a similar reaction though somewhat milder. There was a rise of temperature to 100 within an hour after the injection, but it dropped to normal by evening. The balance of the 40 cc. was given in divided doses without reaction. On January 29th, 15 cc. were given with severe reaction. The pulse became very rapid, ranging from 128 to 144, and there was marked tightness of the chest. The reaction lasted for nearly thirty minutes and was followed by severe headache. The balance of this dose and the last three 50 cc. ampules were given in daily doses ranging from five to seven ccs. each. There was very little reaction after the injections; occasionally there was nausea and headache with a slight flushing and tingling in the skin. The last dose was given on March 23rd.

There has been progressive improvement in her general health, she has gained in weight, and the appetite is improved. The aching has subsided and there has been no further sweats. The temperature has been normal since March.

Comment

Both vaccine and serum were used in this case with apparently better results from the serum. It might be possible that if a sufficiently large dose of the vaccine were given to produce a chill and other general symptoms, better results might have been obtained from its use. While it is true the vaccine did not produce a cure it gave some relief from the symptoms while it was used.

The serum was more helpful, but required repeated doses to produce a cure. From the reactions that were obtained, large doses will have to be used with caution, but smaller doses may be given intravenously at regular intervals without unfavorable reaction.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

THE ANNUAL SESSION OF 1932

To the Members of the Arkansas Medical Society:

Every member of the Arkansas Medical Society should attend its annual meeting which will be held in Little Rock, April 5, 6 and 7, 1932. We believe we can truthfully say that no meeting of this Society has ever held greater promise of a well rounded and instructive program than will be offered you this year. Several distinguished guests are coming from leading medical centers and will present in a most fascinating manner subjects of interest. Among them will be found Dr. H. S. Crossen, Gynecologist of St. Louis, who needs no introduction to the profession of this State; Dr. A. E. Hertzler, Professor of Surgery of Kansas University Medical School, who is not only a surgeon of recognized ability but an able and entertaining speaker; Dr. J. M. Martin of Dallas, Texas, a radiologist of national reputation and Professor of Radiology at Baylor University; and Dr. W. H. Olmsted of St. Louis, Associate Professor of Clinical Medical of Washington University. There will be others along with some of the finest talent of this State. The added entertainment features, we are assured by the Entertainment Committee, will meet with your entire approval. We are also assured that the Pulaski County Medical Society, which has not entertained you for five years, is glad to have you back and eager to show you so.

Don't forget the dates, April 5, 6 and 7, and the place, Little Rock. If you miss this meeting I am sure you will regret it.

Fraternally,

R. J. CALCOTE,
Chairman, Program Committee.

Personal and News Items

Dr. and Mrs. H. H. Niehuss of El Dorado made a short visit in Little Rock, recently.

The third annual meeting of the Medical Association of the Missouri Pacific Railroad met January 29-30, 1932, in St. Louis, Mo.

Dues for 1932 are now payable with your County Secretary. Your prompt remittance will be greatly appreciated.

April 5, 6 and 7 has been selected for the annual meeting of the Arkansas Medical Society to be held in Little Rock. Headquarters, Hotel Marion.

Among the birth certificates filed at the city clerk's office in Little Rock includes that of Dr. and Mrs. H. B. Cummins, January 28, a daughter, Mary Earl.

Dr. W. M. Blackshare, Hot Springs, announces the opening of his offices in Suites 801-802 Medical Arts Building. Practice limited to Gastro-Enterology and Proctology.

Faulkner County Medical Society elected the following officers for 1932: President, J. R. Kitley, Mayflower; Vice-President, I. N. McCollum, Conway; Secretary-Treasurer, J. S. Westerfield, Conway.

The newly elected officers of Union County Medical Society for 1932 are: President, David LeVine, El Dorado; Vice-President, J. Murry Smith, Smackover; Secretary-Treasurer, L. A. Purifoy, El Dorado.

Local news of possible interest to the medical profession, notes and removals, changes in address, births, deaths and weddings will be gratefully received by the editor of this Journal.

The next written examination of the American Board of Obstetrics and Gynecology will be held in nineteen different cities of the United States and Canada at 2:00 p. m. on Saturday, March 26, 1932. The general, oral and clinical examination will be held in New Orleans on Tuesday, May 10, 1932, immediately preceding the meeting of the American Medical Association. For detailed information and application blanks apply to the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburg, Pennsylvania.

On February 4, Governor Parnell appointed two new members to the State Board of Health to fill vacancies resulting from expiration of terms. Dr. E. D. McKnight of Brinkley was appointed from the Second Congressional District to succeed Dr. E. L. Watson of Newport, and Dr. J. G. Gladden of Western Grove was appointed from the Third Congressional District to succeed Dr. A. S. Gregg of Fayetteville. The appointments were for terms of four years. Dr. R. M. Eubanks of Little Rock was elected president of the board at the annual business meeting recently. He succeeds Dr. W. P. Parks of Hot Springs. Other members of the board are: Dr. L. D. Duncan of Waldron, Dr. O. L. Williamson of Marianna and Dr. F. O. Mahony of El Dorado.

TRI-COUNTY MEDICAL SOCIETY
(Reported by R. B. Robins, Sec.)

The Tri-County Medical Society, composed of Union, Columbia and Ouachita counties, met at the Randolph Hotel in El Dorado, Tuesday night, January 19. After a delightful banquet and musical entertainment the following program was rendered:

Welcome Address—Dr. Chas. E. Dickens, Superintendent, El Dorado Schools.

Interpretation of the Shoulder's Bill—Hon. Joe K. Mahoney, Attorney.

Evils of Too Much Milk—Dr. Eugene Rosamond, Memphis.

Radium and X-ray—Dr. S. C. Barrow, President, Louisiana State Medical Society.

Diverticulitis of Colon—Report of Case—Dr. David LeVine, El Dorado.

The following officers were elected: Dr. H. K. Carrington of Magnolia, President; Dr. R. B. Robins of Camden, Secretary.

Resolutions were passed endorsing the Shoulder's Bill and it was requested that the Secretary advise our representatives in Congress regarding this action by the society.

The gist of the Hon. Joe K. Mahoney's statement regarding the Shoulder's Bill was as follows:

That under the present plan and law, the hospitalization of the ex-soldiers was done in a haphazard way. If the government pur-

sues the plan that has been started of building hospitals to accommodate the ex-soldiers, equipping and maintaining them in the different parts of the United States, where sufficient political influence may be brought to bear for the establishment of these institutions, that the probability is that these expenditures will be in excess of the advantages obtained by the veterans. Under the Shoulder's Resolution, it is simply intended to substitute for the present policy, disability insurance for the disabled and sick veterans, with hospitalization made immediately available in the community where the sickness or accident occurs. This insurance plan gives immediate service, without too much "red tape" and insures the veteran the selection of his own doctor; his own hospital; his own nurse, and leaves him within the community where his relatives and friends reside; that he may be assured the personal attention of those who have his interest at heart. The insurance plan spends the money in the community where the veteran lives, thereby the taxpayer receives some of the benefits, as well as the veteran. Again the insurance plan can be supported and maintained by the taxpayer at an expense entirely reasonable and within keeping with the benefits received, whereas the present plan under the building program duplicates the hospitals already established in the several communities of the United States; it tends to build up a centralized bureau whereby the expenditures are far in excess of the benefits derived by the veteran and at a total loss of revenue to the community from whence the veteran comes and the taxes are collected. The operation of government hospitals at the best is mechanical, bureaucratic and far removed from the place of injury or acute attack of sickness by the veteran and does not give the veteran the opportunity of selecting his own hospital and physician or surgeon. It destroys the system of the practice of medicine in the United States; it deprives that surgeon or that physician of the legitimate revenues which would ordinarly flow into his treasury but leaves him the doing of many cases of charity for the veteran who is unable or unwilling to obtain hospitalization in one of the mechanical institutions maintained by the government at places far removed from the home, friends and relatives of the veteran.

The veteran has the right to remain in his community, to be a patient in his own hospital, to the end that he may be cared for by a nurse of his own selection, attended by a physician whom he knows and trusts, finally to be near his friends and family and receive their care, friendly visits, love and affection.

EIGHTH COUNCILOR DISTRICT MEDICAL SOCIETY

(Reported by A. L. Goatcher)

The Eighth Councilor District Medical Society met in the county court house at Morrilton, January 21, at 3:00 p. m.

The meeting was called to order by the councilor, Dr. M. E. McCaskill, Little Rock. Dr. W. H. Bruce of Morrilton and Dr. A. L. Goatcher of Plumerville were elected temporary chairman and secretary. Dr. T. W. Hardison of Petit Jean Mountain gave the welcome address and Dr. Earle H. Hunt of Clarksville, the response. Secretaries of the different county societies were requested to act as a committee to recommend a place of meeting for the next session. A motion prevailed that this organization meet twice each year.

Dr. Pat Murphey of Little Rock delivered an instructive lecture on "Acute Brain Injuries; With and Without Fracture of the Skull." Discussions were by Geo. V. Lewis, F. Walter Carruthers, W. A. Snodgrass, Sr., L. V. Parmley, J. F. Shuffield, D. A. Rhinehart, M. C. Hawkins, R. E. Pryor, T. M. Fly, all of Little Rock, and Earle H. Hunt, Clarksville.

Dr. H. S. Thatcher of Little Rock gave a "Resume of the International Congress of Clinical Medicine at Paris, France," in 1931.

At six o'clock, dinner was served at the Public Library. Invocation by Rev. S. J. Patterson of Morrilton. Dr. D. A. Rhinehart of Little Rock delivered an interesting address. Other speakers were: Judge T. J. Moore, Mayor O. J. Olson, Editor C. B. Hurley of the Morrilton Democrat, Editor C. W. Dodd of The Morrilton Headlight, Drs. M. E. McCaskill, R. L. Smith, W. A. Snodgrass, Sr., W. F. Smith, W. R. Hunt, L. V. Parmley, F. W. Carruthers, E. H. White, S. J. Wolfermann, and John R. Dibrell.

Officers elected for the year were: R. L. Smith, Russellville, president; C. H. Dickerson, Conway, vice-president; A. L. Goatcher, Plumerville, secretary. Little Rock was chosen

as the next place of meeting, which will be in September.

Those attending the meeting were: Pulaski County: M. J. Kilbury, C. C. Reed, Joe H. Sanderlin, M. E. McCaskill, S. C. Fulmer, Paul Fulmer, E. H. White, W. A. Snodgrass, Sr., John R. Dibrell, Oliver C. Melson, F. Walter Carruthers, H. S. Thatcher, Martin C. Hawkins, Jr., Geo. D. Thompson, Wm. A. Snodgrass, Jr., W. L. Sadler, K. W. Cosgrove, Luther D. Reagan, T. M. Fly, Alan G. Cazort, G. W. Reagan, R. J. Calcote, Dewell Gann, Jr., Robert Caldwell, A. C. Kirby, M. G. Daly, James E. Jones, R. E. Pryor, D. A. Rhinehart, Gordon Hastings, W. N. Freemyer, L. V. Parmley, Pat Murphey, R. Q. Patterson, Hoyt R. Allen, Geo. V. Lewis, Clyde D. Rodgers, J. A. Summers, Joe F. Shuffield, W. F. Smith, J. P. Sheppard, H. Fay H. Jones and S. P. Junkin. Conway County: W. H. Bruce, E. L. Matthews, H. E. Mobley, J. M. Matthews, W. R. Holliway, T. W. Hardison, J. H. Jackson, A. L. Goatcher, and H. C. Caruthers. Faulkner County: R. L. Dawson, N. E. Fraser, W. T. McDonald, H. E. Cureton, C. H. Dickerson, H. T. Smith, and Louis Dunaway. Johnson County: J. S. Kolb, Earle H. Hunt, W. R. Hunt, James M. Kolb, and A. L. Boen: Pope County: W. P. Scarlett, R. L. Smith, A. B. Tate, L. Gardner, L. M. Smith and W. A. Montgomery. Perry County: R. A. Jones: Yell County: T. J. Pool. Sebastian County: W. J. Wolferman and W. R. Brooksher, Jr.

REPORT OF CONFERENCE BETWEEN THE AMERICAN LEGION AND THE AMERICAN MEDICAL ASSOCIATION

The Second Conference with the committee from the American Legion was held at the headquarters of the American Medical Association on December 30, 1931. There were in attendance representing the American Legion: Capt. Watson B. Miller, Chairman of the Rehabilitation Committee; Mr. John A. Hartman, National Secretary, Area "D"; Mr. E. V. Cliff, National Executive Committeeman; Mr. E. A. Hayes, Chairman, Area "D" Rehabilitation Committee; Dr. F. G. Norbury; Mr. Charles C. Kapschull and Mr. Guy E. Bonney, members of the Rehabilitation Committee. Dr. Martin Cooley, Washington, D. C., represented the United States Veterans' Administration. Mr. Paul H. Fesler, President, and Dr. Bert W. Caldwell, Executive Secretary, represented the American Hospital Association. The American Medical Association was represented by Dr. C. B. Wright, Chairman, and Drs. J. H. J. Upham, Thomas S. Cullen and E. H. Cary, members of the Legislative Committee (Dr. Cary is also President-Elect, and Drs. Upham and Cullen are members of the Board of Trustees); Drs. H. H. Shoulders, F. S. Crockett, Otho A. Fiedler, Angus McLean and E. A. Meyerding, members of the Auxiliary Committee of the Legislative Committee; Dr. E. B. Heckel, Chairman, and Dr. J. H. Walsh, Secretary of the Board of Trustees; Dr. Olin West, Secretary and General Manager; Dr. Morris Fishbein, Editor of The Journal; Dr. W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation; Dr. W. D. Cutter, Secretary of the Council on Medical Education and Hospitals, and Mr. Homer Sanger, one of the personnel of that Council.

Almost every angle of veterans' legislation was discussed—the point of view of the Legion, the point of view of the Veterans' Administration, the point of view of the American Hospital Association, the point of view of the American Medical Association—and, in addition, there was a very thorough discussion of the insurance plan of Dr. Shoulders.

The early part of this Conference, after preliminary discussion by Dr. Shoulders and introductory remarks by Capt. Miller, Dr. Heckel and Dr. Cooley, was largely taken up with the discussion of hospital costs. After a great deal of discussion, there was a general agreement that this discussion was futile because there is no basis of comparison, due to the facts: First, none of the veterans' hospital costs include the cost of construction, interest on investment, depreciation costs, complete cost of transportation, cost of the administration in Washington, and the cost of one large diagnostic center in California; second, none of the statements in regard to cost were based entirely on the same group of cases or same type of care and in reports of private hospital costs extreme cases were cited; third, many of the comparisons made were based on obsolete contracts which dated back since 1926 and no real attempt had been made to make a survey of the civilian hospital facilities for this purpose.

The position was taken by the Veterans' Administration representative that the question of costs of the two methods of care was not the important consideration but was important only in so far as it related to better care of the veteran; that the Veterans' Administration was not interested in perpetuating a system of federal medicine, being in fact very much opposed to such a system, as it was very sympathetic to the practice of medicine, and that it strongly urged the care of acute disease and emergency surgery as convenient as possible to home at the expense of the government.

It was brought out that there was no need for increase in tuberculosis hospitals but it was claimed that there was a great need for more hospitals for patients suffering from nervous and mental diseases, and that patients with mental disease were being compensated by the government and yet were at large. An instance was cited where one of these patients had recently murdered his father. It was generally agreed that this type of patient demanded hospitalization; that the hospital building program of the future should be confined to this group, and that this building program should fit in as nearly as possible with future civilian needs for this type of hospital. It was also shown that the hospital building program of the present was not by any means determined by the Legion or Veterans' Administration, but largely by congressmen. The extent of the hospital beds necessary to take care of the loan imposed upon the Veterans' Administration by Congress was discussed and various estimates were made from sixty to one hundred thousand beds. These estimates are purely theoretical and in the minds of many of us might be as well placed at two hundred thousand beds as at sixty, considering the expansion of this whole program in the recent past.

In the discussion of what these beds might be used for after a few years when the veterans' needs were largely satisfied, two suggestions were brought out: (1) Needs for future warfare; (2) the possibility that they might be used for the civilian population under a new system of social medicine. The representative of the Veterans' Administration would not commit himself on the future plans but took the stand that its sole object was to carry out, to the best of its ability, and with the greatest efficiency, the mandates of Congress.

The representatives of the American Hospital Association strongly urged the use of civilian hospitals for all veterans waiting to be hospitalized and also made a plea for the smaller hospitals throughout the country as, they claimed, size had nothing to do with the question and many of the smaller hospitals were better equipped and could give better service for the ordinary conditions than some of the large ones.

The representatives of the Legion were particularly interested in the rating schedule of the Veterans' Administration and asked us for our cooperation in simplifying a schedule which they claimed was impossible to understand.

The Trustees of the American Medical Association present, and the officers, including Dr. Fishbein and Dr. West, expressed great interest in the meeting and were very anxious to offer any possible cooperation to both the Veterans' Administration and to the American Legion. Dr. Fishbein made a very strong plea for the solidarity of family life and the dangers of the State taking over responsibilities and duties which rightfully belong in the family, and emphasized the danger of all social schemes which separated the members of a family from each other. He called attention to the fact that the present plan of medical care and hospitalization for the veterans was conducive to the breaking up of the family, instigating a program contrary to the foundation of our present social order.

The discussion throughout was open and frank. The representatives of the Legion, I may say, met us more than half way, expressed a frank desire to cooperate with us in every way and welcomed our help in solving many of their problems. As representatives of a great body they were not in a position to commit themselves to the Shoulders' plan particularly as this plan had been treated with slight courtesy at the national convention at Detroit. They expressed their continued interest in it, feeling, however, that it would be difficult to operate and hard to get legislative enactment for such a plan. Personally they were not in any way opposed to this idea, as it would confer an additional benefit on the veteran.

A tentative agreement was suggested which embodied: (1) That the hospital building

program should stop, except for the erection of hospitals for the care of patients suffering from nervous and mental diseases, and all building plans should be modified as far as possible to meet the future needs of the civilian population by location and distribution; (2) that a modification of veterans' legislation should be asked, allowing that veterans be taken care of in the civilian hospitals at home and that all acute surgical and medical conditions should be so cared for. All of the organizations were urged to consider carefully this tentative agreement and as far as possible obtain reactions from their own organizations.

Capt. Miller then proposed that the representatives of the American Medical Association, American Hospital Association, Committee on Rehabilitation, Veterans' Administration and American Legion, confer in Washington on the first, second, and third of February. This was agreed upon.

In conclusion, one might ask what were the results of this meeting. As I see it, they are:

1. A far better understanding of each other's point of view.

2. A better understanding of the Veterans' Administration.

3. An opportunity on the part of the American Medical Association to perform a real service in helping to simplify the disability rating schedule of the Veterans' Administration.

4. A tentative platform on which we can all stand; that is, agreement on revising the law so that veterans may be taken care of by home doctors and hospitals, and second, a termination of hospital building, except when necessary for the care of patients suffering from nervous and mental diseases, and modified as far as possible to fit in with the civilian hospital of the future.

This Conference accomplished everything that could be reasonably expected, in our opinion. It is, however, only a beginning. What small committees decide will have very little effect if not backed up by a united and informed profession. The announcement of any program might meet with immediate opposition on the part of the doctors or the veterans unless they are sufficiently informed and have a point of view. One should bear in mind, in addition, that what is going to be accomplished will be largely determined by the American Legion which is well organized, has very efficient leadership, and has an appeal in the name of the disabled veteran which is almost irresistible.

We would, therefore, again urge every State medical association to take steps to get acquainted with the American Legion and its point of view. This, we feel, should be done quietly through the organization of group committees or individuals, medical veterans largely, who are members of Legion posts.

We feel it is absolutely essential to the future of medicine in this country that this present federal hospital program be curtailed to the bone and that the Legion should be informed that we have existing now facilities for the medical care of veterans—facilities which are quite adequate for the general population, including the wives and children, mothers and fathers, of veterans.

We would further urge you to contact your congressmen and senators and give them an idea of what is going on and how we feel about the building of hospitals. The family advisors of senators and congressmen are the best men through which to work. These men have the confidence of our representatives and through them proper information may be disseminated quickly. An effort should be made to find out who they are. Dr. William H. Welch told me that that was the method he had used on occasions some thirty years ago and considered it the most effective.

Do not forget the Shoulders' Resolution which has aroused the profession to the folly of the present method of care for veterans, and do not forget that this plan or a modification of it may eventually be adopted by the American Legion as the simplest and most equable method of furnishing medical benefit for veterans. We must remember that any type of federal medicine, including federalization of hospitals, must be eventually enacted into law by Congress before it is operable. There is no question in the minds of informed medical men that if the profession of this country were united and would work they could largely control legislation relating to the practice of medicine in this country.

CHARLES B. WRIGHT, *Chairman,*
Committee on Legislative Activities.

Auxiliary Notes

The Woman's Auxiliary to the Arkansas Medical Society held its first semi-annual meeting of the year, January 22, at the Woman's City Club of Little Rock. Mrs. W. R. Brooksher, Jr., president Fort Smith, called the meeting to order. Minutes of last session were read by the secretary, Mrs. Pierre Redman, Fort Smith, and approved. Report of standing committees was given: Mrs. G. A. Hebert, Hot Springs, treasurer; Mrs. B. A. Rhinehart, Little Rock, organization; Mrs. C. W. Garrison, Little Rock, historian; Mrs. Marcus T. Smith, Conway, publicity; Mrs. H. H. Smith, Fort Smith, public relations; Mrs. C. G. Hinkle, Batesville, memorial; Mrs. Chas. E. Oates, Little Rock, program. Mrs. Dremen reported that three loans were made to medical students the past year. A motion was carried to have Mrs. Chas. E. Oates made permanent chairman of this fund. County presidents reporting were: Mesdames C. H. Nims, Garland; T. G. Porter, Prairie; D. A. Rhinehart, Pulaski; Thomas Watson, Saline. Written reports were read from Arkansas, Faulkner and Miller-Bowie counties. Luncheon was served at noon, followed by a talk by Mrs. L. D. Reagan.

The Auxiliary to the Miller-Bowie Counties Medical Society met January 22, 1932, at the home of Mrs. Preston Hunt, with Mrs. E. M. Watts and Mrs. Geogre W. Parsons acting as co-hostesses.

Mrs. Hunt gave a lucid resume of three recent books pertaining to doctor's lives, "The Magnificent Obsession," by Lloyd Cassil Douglas; "Hatter's Castle," by Archibald Joseph Cronin, and "Biography of Sir William Osler," by Edith Gittings Reid.

Following the program, Mrs. L. J. Kosminsky, president, presided over a brief business session. After various reports were heard the motion was passed to plant two trees in the George Washington Memorial Grove in Spring Lake Park. Mrs. Kosminsky announced the following members of the nominating committee to report at the next meeting as follows: Mrs. S. A. Collom, chairman, Mrs. E. M. Watts, Mrs. L. H. Lanier, Mrs. J. T. Robison, and Mrs. Roy Baskett.

The next meeting of the auxiliary will be held February 26. Hostesses will be: Mrs. T. E. Fuller, Mrs. A. W. Roberts, Mrs. Chas. Adna Smith, Mrs. Chas. Adna Smith, Jr., and Mrs. W. A. Hutchinson.

The Auxiliary to the Pulaski County Medical Society met January 20, at the home of Mrs. H. Fay H. Jones. Mesdames M. C. Hawkins, Jr., E. H. White and W. R. Richardson were assisting hostesses. The president, Mrs. D. A. Rhinehart, presided over the business meeting. Mrs. Bryan Bennett, chairman of membership committee, reported Mrs. E. H. Wilkes group in the lead by four points in the membership contest. Mrs. Pringle of Fort Roots and Miss Kilbury of New York were guests. Dr. H. S. Thatcher gave a most interesting talk on Lord Lister, "A Pioneer in Medicine." Mesdames Rhinehart and W. F. Smith presided over a most attractive tea table during an enjoyable social hour.

January 28, 1932, Mesdames Anderson Watkins, Chas. E. Oates and B. A. Rhinehart of Little Rock, went to Pine Bluff and assisted the ladies there in organizing an auxiliary to the Jefferson County Medical Society. Those present were: Mesdames C. B. Capel, J. W. John, T. J. Cunningham, O. W. Clarke, O. C. Hankison, A. A. Hughes and J. S. Spillyards. Mrs. John was elected president and Mrs. Spillyards, secretary-treasurer. A meeting was to be held at the home of Mrs. Capel, February 4, to complete the organization, with Mrs. John and Mrs. Spillyards as co-hostesses.

DR. UTLEY ENTERTAINS

The Lonoke County Medical Society was entertained with a banquet by Dr. F. E. Utley of Cabot, February 10, celebrating his 54th birthday. Dr. Utley is president of the society. Dr. Robert Caldwell of Little Rock was toastmaster. Those who spoke were Dr. Paul Mahoney, Dr. Dewell Gann, Jr., Dr. H. Fay H. Jones, Dr. S. C. Fulmer and Dr. M. G. Daly, all of Little Rock; Dr. Callahan, Dr. Corn and Dr. Kelly of Lonoke; Dr. Bradley, Dr. Ward and Dr. Watson of England; Dr. Cowger and Dr. Wells of Scott, and Dr. Blair, Dr. Park and Dr. Sheaffer of Cabot.

Obituary

MOORE, JULIUS SHEPPARD—Dr. J. Sheppard Moore of Arkadelphia, aged 51, died January 27, 1932, following injuries received in an automobile accident near Junction City.

Dr. Moore received his medical education at the University of Virginia, Department of Medicine, graduating in 1909. During the World War he was a captain in the Medical Corps and served in France. After the war he returned to Arkadelphia and began practice in partnership with Dr. Charles Wallis. They built the Moore and Wallis sanitarium which Dr. Moore operated until his death.

He is survived by his wife, his mother and two sisters, Mrs. Charles Johnston of Texarkana and Mrs. D. T. Huie of Little Rock.

REYES, WILLIAM R.—Dr. W. R. Reyes of Alma, aged 72, died at the home of his daughter, in Fort Smith, February 7, 1932. Several months ago Dr. Reyes suffered a cervical fracture in an automobile accident, but had recovered sufficiently to resume his practice, and his death was due to other causes.

At the time of his death, he was president of the Tenth Councilor District Medical Society.

Among the survivors, are his wife, a son, Dr. C. M. Reyes, and a daughter, Mrs. W. J. Bolling.

MOORE, WILLIAM M.—Dr. W. M. Moore, Arkadelphia, aged 70, died February 4, 1932. He had practiced in Arkadelphia for twenty years, and was active in business and civic affairs.

Surviving are his widow, formerly Miss Lela Ballew, two children, Mrs. Louis Jacks of Sparkman and Miss Vernon Moore, junior student in Ouachita College; two sisters, Mrs. Allie Shifflett and Mrs. Eula Hunsinger, and two brothers, John Moore and Dr. Tom Moore, all of Texas.

County Societies

ARKANSAS COUNTY

(Reported by J. E. Neighbors, Sec.)

The Arkansas County Medical Society met in Stuttgart, January 12, with the following present: Park, Rascoe, Whitehead, Drennen, Swindler, John, Wilson and Neighbors. Visiting physicians were: Drs. Cosgrove and Bennett of Little Rock.

A very interesting paper on "Headaches" was presented by Dr. K. W. Cosgrove. Dr. J. E. Neighbors read a paper on "Keloid," with a report of a case.

Officers elected were: President, M. C. John, Stuttgart; Vice-President, H. C. Riley, Bayou Meto; Secretary-Treasurer, J. E. Neighbors, Stuttgart; delegate to the State meeting, E. B. Swindler, Stuttgart; alternate, S. A. Drennen, Stuttgart.

The next meeting will be held in DeWitt, February 9th, with Dr. Homer Dickens in charge of the program.

BOONE COUNTY

(Reported by W. H. Poynor, Sec.)

The Boone County Medical Society met at Harrison, in the office of Dr. W. H. Poynor, January 26. The president, Dr. W. T. Moon, being absent, the meeting was called to order by Dr. D. L. Owens, vice-president. Minutes of the previous meeting were read and approved.

Members present: D. L. Owens, D. E. Evans, J. G. Gladden, J. C. Blackwood, W. L. Watkins, J. H. Fowler, F. B. Kirby and W. H. Poynor.

The following officers were elected: J. C. Blackwood, Harrison, president; D. E. Evans, Harrison, first vice-president; W. L. Watkins, Alpena Pass, second vice-president; W. H. Poynor, Harrison, secretary-treasurer. Delegate to the State convention, J. G. Gladden, Western Grove; alternate, J. H. Fowler, Harrison; second alternate, W. H. Poynor, Harrison; third alternate, F. B. Kirby, Harrison. Councilors: Three years, W. L. Watkins; two years, F. B. Kirby; one year, W. H. Poynor.

A round table discussion was held for the betterment of the society and the medical profession as a whole. Drs. Blackwood and Poynor will act as a committee to arrange a program for the next meeting, which will be held in Harrison the first Tuesday in March.

CLAY COUNTY

(Reported by J. E. McGuire, Sec.)

The Clay County Medical Society met in the Masonic Hall in Piggott, Wednesday afternoon, January 20, for the purpose of electing officers for the ensuing year, and creating a more active interest in the society.

Those present were: N. J. Latimer, M. C. Richardson of Corning; W. O. Parrish, W. J. Blackwood, Byron Futrell, and B. H. Custer of Rector; J. P. Hiller of Pollard, F. H. Jones, E. W. Thornton, W. P. Custer, Geo. Cohn, and J. E. McGuire of Piggott.

Newly elected officers are: President, W. O. Parrish, Rector; Vice-President, F. H. Jones, Piggott; Secretary-Treasurer, J. E. McGuire, Piggott.

It was decided to meet regularly the second Tuesday night of each month and at different places in the county. Everyone spoke enthusiastically for an increased and better co-ordinated society to the end that medical topics might be more freely discussed, and the welfare of the public more safely guarded.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society met in Osceola, January 12. The meeting was called to order by the newly elected president, Dr. W. J. Sheddan. Present: Hosey, Joiner; R. L. Johnson, Bassett; Ellis, Wilson; Hudson, Luxora; Washburn, Husbands and Smith, Blytheville; Sheddan and Harwell, Osceola.

The essayist for the evening was N. B. Ellis, his subject being, "Management of Lobar Pneumonia." The discussion was opened by T. F. Hudson.

The president appointed, as members of the Committee on Public Health and Legislation, A. M. Washburn, T. F. Hudson and F. L. Husbands.

PHILLIPS COUNTY

(Reported by M. Fink, Sec.)

The Phillips County Medical Society held its annual meeting in Helena, January 26, 1932, also observing its sixty-first anniversary. It was organized in 1871, and is the oldest county medical society in Arkansas. Those present included Rightor, Russwurm, Orr, Butts, A. E. Cox, Aris Cox, King, Nicholls, Henry, Fink and Storm.

The following officers were elected for 1932: President, Allen E. Cox, Helena; Vice-President, H. H. Rightor, Helena; Secretary-Treasurer, M. Fink, Helena; Censor, Geo. R. Storm, West Helena; delegate to the meeting of the Arkansas Medical Society, J. B. Ellis, Helena; alternate, Aris W. Cox, Helena. Drs. W. C. King and Aris W. Cox were elected to the governing board of the Helena Hospital.

The next meeting will be held the first Tuesday in March, at the Chamber of Commerce, in Helena.

WASHINGTON COUNTY

(Reported by Fount Richardson, Sec.)

At the meeting of the Washington County Medical Society, held in Fayetteville, February 2, Dr. Will H. Mock, Prairie Grove, president-elect of the Arkansas Medical Society, was the chief speaker. His topic was "Extra-uterine Pregnancy." He emphasized the importance of diagnosis. This excellent paper was well received by the largest attendance the Society has had in years.

The Society adopted a resolution, introduced by Dr. Sisco of Springdale, as follows:

Whereas, The Washington County Medical Society, in regular session at Fayetteville, on the second day of February, 1932, having brought to its attention some of the splendid work done by our prosecuting attorney in enforcing the laws of our State against the irregularities and quack practice of medicine in this judicial district; and,

Whereas, it has come to the attention of this Society that there are a number of practitioners who are unlawfully and fraudulently practicing medicine under assumed names or using a license which belong to physicians who are now dead; therefore,

Be It Resolved, that this county organization go on record as endorsing the action of the Hon. James Trimble, prosecuting attorney, for this district, for the splendid way in which he is endeavoring to prosecute the irregularities and oust the fraudulent practitioners of medicine, and we hereby unreservedly pledge our sincere co-operation.

Book Reviews

Textbook of Histology. For Medical and Dental Students. By Eugene C. Piette, M. D., Pathologist and Director of the Laboratory of the West Suburban Hospital. Oak Park, Illinois. Consultant Pathologist of the Chicago State Hospital, Chicago, Illinois. With 277 Illustrations. Some in Colors. Published by F. A. Davis Company, Philadelphia. Price, $4.50 net.

This book reflects the present-day knowledge of histology in short and concise style. The influence of mechanical agents has been paid adequate attention, and the autonomous nervous system and the reticuloendothelial system well deserves being included in this new edition.

Chemistry for Nurses. Including Certain Essential Principles from Inorganic, Organic and Biochemistry. A Combined Text and Laboratory Manual. By Harry C. Biddle, A. M., Instructor in Chemistry, School of Nursing, Western Reserve University; Lecturer in Chemistry at St. Luke's Hospital, Cleveland, Ohio. With 74 Illustrations. Published by F. A. Davis Company, Philadelphia. Price, $2.75 net.

This book presents the essential facts of Chemistry as recommended by the National League of Nursing Education. In addition to the first two parts of Inorganic and Organic Chemistry the Appendix presents, among other items, some essential chemical facts relating to topics that the nurse, and young physician may pursue in other courses.

Abdomino-Pelvic Diagnosis in Women. By Arthur John Walsched, M. D., Director of Obstetrical and Gynecological Department of Broad Street Hospital; Director of Obstetrical and Gynecological Department of Pan-American Medical Center and Clinics, New York City. With 397 illustrations and one color plate. Published by The C. V. Mosby Company, St. Louis. Price, $12.50.

The purpose of this book is to present a clinical monograph for the student who, with some practical experience, can visualize the subject he is reading. The fundamental and academic portions are omitted, and practical information is presented.

Part One, pertains to "General Gynecology," and Part Two, "Special Gynecology."

Hemorrhoids—The Injection Treatment and Pruritus Ani. By Lawrence Goldbacher, M. D., Philadelphia. Illustrated with 31 half-tone and line engravings, some in colors. Second Revised Edition. Published by F. A. Davis Company, Philadelphia. Price, $3.50 net.

The author states that his purpose is to present to the medical profession certain practical and readable information regarding hemorrhoids and pruritus ani, as brief and simple as possible.

The first part refers to "General Considerations." Second part, "External Hemorrhoids and Treatment." Third part, "Internal Hemorrhoids and the Injection Treatment." Part four, "Pruritus Ani." The book is illustrated.

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume II, No. 3. (New York Number—June, 1931). 239 pages with 73 illustrations. Per clinic year (February, 1931 to December, 1931). Paper, $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

Twenty-eight contributors are presented in this volume of the Surgical Clinics of North America (New York Number). Of these we wish to mention the interesting clinics of Dr. Edward J. Donovan, St. Luke's Hospital, "Splenectomy for Thrombocytopenic Purpura." "Subtotal Gastrectomy for Penetrating Ulcer of the Lesser Curvature of the Stomach." Intestinal Obstruction Due to Carcinoma of the Sigmoid. Ceeostomy. Mikulicz Operation on the Sigmoid Ten Days Later."

Proctoscopic Examination and the Treatment of Hemorrhoids and Anal Pruritus. By Louis A. Buie, B. A., M. D., F. A. C. S., Section on Proctology, The Mayo Clinic, Rochester, Minnesota, and Associate Professor of Surgery, The Mayo Foundation, University of Minnesota, Minneapolis, Minnesota. Octavo of 178 pages with 72 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, $3.50 net.

This book presents the technic of direct examination of the anus, rectum, and sigmoid; to outline the treatment of hemorrhoids and to offer new information on the subject of anal pruritus. Dr. William J. Mayo states in the foreword "This little book is offered as a manual of consulting-room diagnosis of diseases of the anus and rectum and of the treatment of hemorrhoids. It is practical and sound.

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Original Articles

THE IRRITABLE SPASTIC COLON; A COMMON CONDITION FREQUENTLY MISMANAGED*

By GEORGE W. PARSON, M. D.,
Texarkana

The colon has probably been held responsible for more diseases than any other organ in the body. It has been considered the seat of senility, the great "autointoxicator" of the body, the harborer of the organisms of cholecystitis and arthritis, and the cess-pool from which arise the poisons that cause headache, migraine, chronic fatigue, hysteria and hypertension.

To suspect an organ as the cause of a disease is usually to treat that organ. So, the colon has been treated. It has been completely extirpated; it has been side-tracked and short-circuited; it has been purged; it has been irritated and probably lacerated with bran and other roughage; and more recently, it has been washed and irrigated until the protective mucus has been torn away and is securely confined in a well-corked bottle.

One would expect that an organ so abused would at times rebel. The colon does rebel. The symptom-complex which occurs under these conditions is the result of a disturbance in the tone and irritability of the colon. Changes in the tone and irritability of the colon occur independently of such abuse, but in almost every case this added insult is an important causative factor. This condition is one of the most frequent findings in the practice of an internist. In an analysis of the records of one hundred consecutive gastro-intestinal cases, it was found that this condition has been diagnosed as the primary disturbance, or as an important contributory one, in 46 per cent. Jordan and Kiefer (1) in a report from the Lahey Clinic state that 30 per cent of 3,000 admissions to the gastro-intestinal service there "had no other lesion except this colonic disturbance."

For want of a better term, this symptom-complex has been designated the irritable spastic colon. It is not certain that the disturbances are limited to the colon. The small intestine may and probably does contribute to the production of the symptoms.

The irritable spastic colon syndrome occurs in two types of cases. In the first, and this is the larger group, there is a basic emotional instability. The patient is the victim of that condition variously called neurasthenia, chronic fatigue, chronic nervous exhaustion and psychoneurosis. During a period of stress such as business difficulties, family misunderstandings, improper sexual adjustments, menopause and the like, there occurs a temporary disturbance in the normal functions of the gastro-intestinal tract. This disturbance may occur in any organ of the body. The usual reaction of the patient is that elimination is insufficient. A laxative is taken. Should a physician be consulted, all too often patient and physician agree that there is billiousness, auto-intoxication or some other condition demanding stimulation of a sluggish liver or emptying of a poisonous colon. Laxatives are again used—this time over a period of days or even of weeks. The process is continued or repeated until irritability and spasticity are added to a gastro-intestinal tract already functionally impaired.

There is abundant clinical and experimental evidence to show that emotions can stimulate or inhibit both the secretary and motor functions of the gastro-intestinal tract. Every one is familiar with the loss of appetite caused by anger or sorrow; the laxative effect of excitement; the failure of digestion in the presence of pain; the increased secretion of saliva at the sight of appetizing food, and the purging effect of fright upon animals. Many

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

other examples might be cited. Anyone interested in this important phase of the subject will find an instructive article by Alvarez in the April 13, 1929, number of the Journal of the American Medical Association.

It is well known that many laxatives act by virtue of their irritant effect upon the gastrointestinal tract. Frequently repeated they disturb the muscular tone of the intestines. It has been shown experimentally that digestion is less complete the day following a dose of castor oil or magnesium sulphate (2). The products of incomplete digestion are themselves irritating and a viscious circle may be thus initiated.

To illustrate the development of an irritable spastic colon under these conditions the following case is cited:

L. M., male, age 31, married, a salesman, has had no serious illnesses or operations. Ten years ago he graduated from the United States Naval Academy. He married soon thereafter and settled down to a comparatively sedentary life.

The patient has always been easily upset nervously. His work is done under a constant nervous tension. When serving as an usher in church he may become very nervous. Upon rising to speak in public or when attempting to solicit a new customer, his throat sometimes "tightens up on him" so that he is unable to speak for a few moments.

About nine years ago he began using laxatives. He felt that it was absolutely necessary for his bowels to move every morning just after breakfast; if they failed to do so, he took a laxative. He frequently had a dull headache which he attributed to constipation; for this he took a laxative.

Approximately one and one-half years ago, the patient began to have pain in the right side of his abdomen. Pain in the right side of the abdomen is his present complaint. The pain is usually a dull ache. Once it was severe enough to cause him to leave a theater. In recent months, he has had pain every day. The discomfort involves the entire right side of the abdomen at times, but as a rule it is limited to the lower right quadrant. Flatulency and bloating are associated with the pain. Relief is obtained by expelling gas, and sometimes by the use of an enema. He has one or two stools daily. They are partly formed and of small calibre.

A diagnosis of chronic appendicitis had been made. No relief had followed medical, osteopathic and chiropractic treatment. Recently ureteral stricture had been suspected and he had been urged to submit to ureteral catheterization.

In the second type of case in which the irritable spastic colon syndrome occurs constipation is the initial development. The constipation is the result of negligence in a high percentage of these cases. Because of their desire for the easiest method of approach, their undying faith in drugs, especially those advertised in papers and magazines, and not uncommonly on the advice of physicians, the patients resort to laxatives. The more laxatives are used the more they are necessary until finally irritability and spasticity are added to a constipation of neglect.

More recently bran and other rough, irritating and indigestible materials have been added to the anti-constipation paraphernalia. Some of these have been extensively advertised and highly commercialized. They are commonly used without the knowledge or consent of a physician. It would seem that dietitions, teachers and food faddists have taken the lead in advocating such products. Many physicians are strongly opposed to their use (3). The ultimate result of the employment of such materials is the same as that following the frequent use of laxatives, viz: irritable spastic colon.

The symptoms of an irritable spastic bowel occasionally develop in cases of diabetes when the diet contains a large amount of indigestible material; during the medical treatment of peptic ulcer when magnesium oxide or some other laxative anti-acid is being used, and in some patients being treated with certain types of high vitamin diets. The possible occurrence of such symptoms under these conditions should be kept in mind. They may be very confusing and if not recognized and corrected may seriously interfere with the progress of the case.

The most common symptoms of an irritable spastic colon are abdominal distress, abdominal flatulency, and changes in the number and character of the stools. Less common symptoms are nausea, vomiting, regurgitation of food and loss of appetite. In many of the cases, the manifestations of the basic emotional instability are evident.

The abdominal distress varies in degree from a vague discomfort to an acute pain suggestive of a surgical emergency. It may be diffuse or it may be limited to any one region of the abdomen. Tenderness along the course of the colon is a frequent accompaniment of the pain.

Flatulency is the most common symptom. The gas may be eructated or it may be expelled as flatus. It frequently manifests itself as abdominal distention with borborygmus and the patients state that they are unable to rid themselves of it.

Constipation is a common complaint. When the patients are carefully questioned, however, it is by far more common to find that they actually have too many stools. The stools vary in number from one to five daily, or even more. They may be watery, or soft and mushy, or partially formed and lumpy, or formed but of pencil size and they frequently contain mucus. They are almost never of normal size and consistency; that is, the size and consistency of an average size ripe banana.

These symptoms occur in various combinations. There is nothing distinctive in the severity or in the location of any individual symptom. Their relationship to each other is of great differential value. The abdominal distress is produced, or is increased in severity when present, by a distention of the colon. It is therefore worse when flatulency is most marked. It may be reproduced by distending the colon with fluid or air. An ordinary enema or the barium enema causes pain when the material flows in and distends the colon. The abdominal distress is relieved when tension in the colon is lessened. Relief therefore occurs when flatus is expelled, when the enema flows out and when there is a bowel movement. Irregularities in the action of the bowels are almost always associated and the greater the irregularity the more pronounced the pain and flatulency. In those cases where nausea, regurgitation of food, or some other gastric manifestation is the outstanding complaint, an analysis of the whole symptomatology will show that the gastric symptom is secondary to the bowel disturbances. The above symptom-complex, in a person with an unstable nervous system who has been using laxatives or large quantities of indigestible food, represents the usual clinical picture of the irritable spastic colon.

Diagnosis is made on the basis of the above clinical picture, which is fairly characteristic, on the frequently found physical sign of tenderness over a palpable colon, and on the exclusion of other abdominal diseases. Laboratory and roentgenologic examinations are of value my experience chiefly for their negative evidence.

It is quite evident that the symptoms given above may be suggestive of a number of diseases. Only a few of these will be discussed.

Smith, Miller and Fowler (4) have reported a group of cases in which gastric manifestations were the outstanding symptoms of a spastic colon. The abdominal distress was located in the epigastrium; it occurred one to three hours after meals, and at times was relieved by the taking of food or sodium bicarbonate. They attributed the symptoms to a reflex prepyloric spasm. This type of case is fairly common in my experience. The picture is very suggestive of gastric or duodenal ulcer. However, and as the above authors pointed out, there is not the same pain, food case sequence so characteristic of ulcer; though sodium bicarbonate or food may give relief, the relief is not as complete as that expected in uncomplicated ulcer and it frequently does not occur unless there is eructation of gas; there are always bowels disturbance of the type already described; the symptoms may be produced by distending the colon, and fluroscopy fails to disclose the presence of an ulcer.

Abdominal pain and tenderness are common to irritable spastic colon and parietal neuralgia of the abdominal wall. Garnett (5) has contributed a series of excellent articles on the latter subject. He has devised "a simple two-stage bedside test" by the use of which intra-abdominal tenderness may be differentiated from tenderness in the abdominal wall. In the first stage of the test, the abdomen is palpated while the anterior abdominal muscles are relaxed. In the second stage, pressure is applied with the finger tips while the patient holds his anterior abdominal muscles rigid. If the tenderness in intra-abdominal it will be elicited during the first stage only. The tense abdominal muscles protect intra-abdominal organs. If the tenderness is in the abdominal wall it will be elicited during both the first and the second stages of the test. This is a most helpful procedure in distinguishing between the tenderness of an irri-

table spastic colon and that of a parietal neuralgia of the abdominal wall. The tenderness, of course, is intra-abdominal in the former and in the abdominal wall in the latter.

Irritable spastic colon and chronic cholecystitis may simulate each other very closely. In the absence of a history of definite biliary colic, chronic cholecystitis is one of the most difficult diseases to recognize. Nevertheless it is a common diagnosis; much more common than that of irritable spastic colon. It is a much less common condition, in my experience. Differentiation between these two diseases is dependent upon a careful history covering the whole course of the disorder, and upon X-Ray studies of the gall-bladder and of the colon. After the most painstaking investigation, an absolute diagnosis cannot be made in some cases. It is my belief that such cases are seldom fit subject for surgery.

Occasionally the pain and tenderness of an irritable spastic colon may be limited to the lower right abdominal quadrant. Much more commonly other regions of the abdomen are also affected. But patients are prone to emphasize distress which occurs in the region of the appendix and to forget or to minimize that which occurs elsewhere in the abdomen. In either case chronic appendicitis is the usual diagnosis. Chronic appendicitis rarely enters into my analysis of a case. I am practically convinced that in a clinical sense chronic appendicitis does not exist.

The more serious organic diseases, especially malignancies of the colon, demand careful consideration in all cases of colonic disfunction. The most important differential diagnostic procedure in these cases is a study of the colon by means of the barium enema. It is hazardous to make a diagnosis of irritable colon in the absence of such studies.

The proper management of the patient with an irritable spastic colon is a difficult problem. It must be recognized that in many cases the colon, if it is let alone, is of secondary importance. The first and frequently the most important step in the treatment is a careful analysis of the nervous status of the patient. As has been indicated, in many of these cases nervous instability and repeated psychic shocks are the basic cause of the colonic disturbances. The patient must be made to see that this is so. It is a sad mistake to focus the attention of a nervously upset, chronically fatigued patient on his or her colon. One has to see only a few of these patients, who, as they state, "have fought their colons all their lives" to realize the truth of this statement.

The second step in the proper management of these cases is an exact diagnosis of the local gastro-intestinal condition. This is dependent upon a complete and painstaking investigation. There should be no uncertainty on the part of the physician. It is essential that the patient be made to feel that the physician is certain of his diagnosis. Many of these people live in constant dread of an operation. They should be told specifically that surgery is not indicated and that it would not be beneficial if employed.

The third step in the proper management of these patients is the regulation of those factors which are of importance in relation to their general health. The harmful effects of overwork, worry and nerve tension should be explained to them and suggestions should be made for their correction. Sufficient sleep and rest are essential. This may be secured by the proper use of the bromides and the barbaturates.

Finally, treatment of the colon itself is of importance. This is a poorly managed phase of the condition. It has been pointed out that laxatives and bran and other roughage irritate the colon and disturb its tone. Their employment should therefore be prohibited. The common practice of using repeated enemas and colonic lavages is to be condemned. Enemas and irrigations are unnecessary; they disturb the tone of the colon; and they are capable of producing severe irritation, and even extensive ulceration. The essential consideration in the care of the colon itself is to let it alone. Permit it to return to its normal functional state and encourage it to do so by the use of a simple bland diet and the tincture of belladonna or atropine.

Summary

1. Irritable spastic colon is a common condition.

2. Nervous instability is the most important predisposing cause.

3. The improper use of laxatives, roughage, enemas, and irrigations in the usual exciting cause.

4. The clinical picture is fairly characteristic.

5. The treatment is rest, reassurance, elimination of those things which irritate and disturb the tone of the colon, and the use of a bland diet and belladonna.

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DISCUSSION

DR. R. L. SANDERS, Memphis: It is a privilege to attend the Arkansas Medical meeting and to participate in your program. I appreciate the invitation your President extended me to be with you on this occasion. I am sorry to have been unable to be here last night to enjoy your fine program and his address; your committee is to be congratulated on arranging such an excellent group of papers.

I am pleased to take part in the discussion of Dr. Parson's paper on spastic colon, for I am convinced that too few papers dealing with diseases of the colon from the medical standpoint are being read at our society meetings. In the past, surgeons have taken the leading role in the presentation of this subject. Unfortunately, they see these cases rather late and often after the disease has entered the last stage. Dr. Parson has stimulated us by his paper and I believe the internists and practitioners will take a renewed interest in the subject, as it is one of profound importance.

If it were possible to eliminate some of the cost of roentgenologic examinations of the gastro-intestinal tract and subject each patient with any type of colon complaint to a roentgenologic study, I am sure that many otherwise hopeless cancers would be detected earlier and treated while yet in the curable stage.

I have a number of lantern slides which I shall hurriedly place on the screen before you. You will observe the large filling defects, representing the various types of malignant growths, and their different locations in the colon. Some of these tumors were resectible, whereas others were inoperable.

Surgery of the colon is an interesting chapter in literature, but it follows in natural sequence the medical phase of the same subject. The mortality following resection of the colon is gradually being reduced by the two-stage operation, intraperitoneal vaccination, and better preliminary preparation of the patient. By co-operation with the medical men, we are hoping to further reduce the dangers in colon surgery by improvement of the preoperative and postoperative care and of the operative technic.

DR. PARSON, in closing: I have nothing else to say except to thank Dr. Sanders for his discussion of the paper.

ELECTROCARDIOGRAPHY AS AN AID IN DIAGNOSIS AND PROGNOSIS OF CARDIAC IRREGULARITIES*

Roy F. Baskett, M. D., Texarkana

Before Mackenzie began his work with the polygraph, we knew very little indeed about cardiac irregularities. The tremendous advances in our knowledge of the heart beat, that have been made in the last quarter century, are the direct result of the widespread use of this instrument, and of the electrocardiagraph, invented by Einthoven in 1903. The knowledge of heart irregularities, we obtained through the electrocardiograph, was made possible by the extensive studies of Lewis and numerous other investigators.

Irregular action of the heart, may or may not be serious as regards its prognosis; hence, an accurate diagnosis as to the arhythmia is of the greatest value. Christian (1), writing in his recent Oxford Monograph states, "almost all forms of arhythmia occurring frequently may be recognized without special instruments such as the polygraph or electrocardiograph. A few however of clinical significance are not recognizable except by study of their electrocardiograms." If we are now able to recognize the majority of the disorders of the heart beat without the aid of graphic methods, it is only because these methods have shown the way.

Christian admits that if a medical man has studied cardiac irregularities, by means of the polygraph or electrocardiograph, and checked these records against his observations made with fingers, eyes, and ears, aided by a stethoscope; he will have a much better understanding of arhythmias. Therefore although it seems possible in certain instances to make a positive diagnosis from electrocardiograms alone, final opinions should not be

*Read before the Fifty-sixth Annual Session of the Arkansas Medical Society, held at Texarkana, April 21, 22, 23, 1931.

formed until, the records are correlated with all the clinical data obtainable.

Before discussing Arhythmias, it becomes quite necessary to have clearly in mind, the point at which the impulse normally arises and the system over which it is conducted, in a normal beating heart. The sino-auricular node, or pacemaker, as it is commonly called is a club-shaped mass of specialized tissue, in which the impulses for the heart's movements have their origin. The measurements of the pacemaker are usually given as two centimeters long and about two millimeters thick. This structure lies embedded in the sulcus terminalis, the groove which marks the junction of the superior vena cava and the right auricle. There is a rich nerve supply from the vagus and sympathetic trunks. After the impulse for the heart's action is discharged by the pacemaker it spreads over the auriclar muscle and reaches the auricular ventricular node. This latter structure lies in the base of the inter-auricular septum and from its lower border the His bundle takes its origin. The His bundle carries the impulse into the ventricles, divides into the right and left branches, over which the impulse is delivered to all parts of the ventricular muscle.

Wilson (2), has grouped the simple classification of arhythmias by Lewis into five large classes and the irregularities discussed in this paper are taken from this arrangement. Some of these are rare and require few comments.

I. Disorders of the heart beat due to variations in the rate, the rhythm and the location of normal impulse formation.

(a) Sinus tachycardia.
(b) Sinus bradycardia.
(c) Sinus arhythmia.
(d) Atrioventricular rhythm.
(e) Independent ventricular rhythm.

II. Heart-block,

(a) Atrioventricular heart-block.
  1. Increased As-Vs interval.
  2. Partial heart-block.
  3. Complete heart-block.
(b) Intraventricular block.
(c) So-called sino-auricular block.

III. Disorders of the heart beat due to abnormal impulse formation.

(a) Extrasystolic arhythmia.
(b) Simple paroxysmal tachycardia.

IV. Disorders of the heart beat due to circus rhythm.

(a) Auricular flutter.
(b) Auricular fibrillation.
(c) Ventricular fibrillation.

V. Pulsus alternans.

Sinus Tachycardia is an increase in heart rate beyond normal limits, due to an increase of the rate of impulse formation within the sino-auricular node. The usual causes are conditions causing transitory diminution of vagus control or temporary stimulation of the accelorator nerves. This is a simple elevation of heart rate without change of the mechanism of the heart beat yet at times it may be necessary to distinguish it from other types of tachycardia. Electro-cardiograms show no important deviation from the normal except the rapid rate.

Sinus Bradycardia is a condition in which the rhythm is abnormally slow dependent upon a slow rate of impulse formation within the sino-auricular node. This may be due to an increase of vagal tone or to toxic action directly on the pacemaker. Sinus bradycardia must be differentiated from bradycardia due to heart-block and final diagnosis in most instances will depend upon the graphic record. The electrocardiogram in sinus bradycardia is normal in every respect except for the slow rate.

Sinus Arhythmia is a waxing and waning of the cardiac rhythm that parallels respiration, the heart rate accelerating during inspiration and slowing with expiration. In other words there is an irregular formation of impulses within the sino-auricular node. This type of arhythmia is very common and most often seen in children and young adults. It is uncommon to see sinus arhythmia in adults when the heart rate exceeds 100 beats per minute. Although this condition in most cases is physiological and of no clinical significance, it is not infrequently confused with some serious disorder. Under such circumstances an electrocardiogram should be made to clear up the diagnosis. The curves are normal in every way except for the rhythmic variation in rate.

Atrioventricular Rhythm is brought about when the sino-auricular node loses its control of the heart and the auricular ventricular node becomes the pacemaker. This condition may be the result of depression or destruction of the sino-auricular node by mechanical, chemical or nervous mechanisms or the causa-

tive agent may act directly upon the auricular ventricular node in such a manner as to increase its rhythmicity. Atrioventricular rhythm sometimes occurs in apparently otherwise normal individuals, after certain drugs, in general myocardial involvement and during acute febrile diseases. When the auricular ventricular node acts as the pacemaker the impulses may arise in the upper, mid or lower regions, each instance causing a different cardiac mechanism, which can scarcely be recognized unless graphic means are used. In the first instance the impulse will reach the auricule slightly before the ventricle, which is shown in the electrocardiogram, as a shortening of the P*-R interval and with inversion or other anomalies of the P wave. When the impulse arises in the mid regions of the auricular ventricular node it reaches the auricles and the ventricles about the same time in which case the P wave occurs synchronously with the QRS complex and is usually invisible in the electrocardiogram. When the impulse arises near the ventricular border of the auricular ventricular node it will reach the ventricles first and the auricles will contract after the ventricles. The electrocardiogram will then usually show the P wave coming somewhere between the R and T waves.

Independent Ventricular Rhythm is a defect in cardiac mechanism in which there is complete dissociation of auricles and ventricles. The ventricular pacemaker lies somewhere in the ventricles, usually in the bundle of His. Since the most common cause of this condition is complete heart-block further discussion comes under that head.

Atrioventricular heart-block includes the three types which arise from defects of conduction along that part of the system, from the upper end of the auricular ventricular node to the bifurication of the His bundle. Conduction disturbances occur under about the same pathologic conditions in the three types of auricular-ventricular block. These causes may be mechanical, infectious diseases, vascular impairments, nervous factors, chronic disease processes and poisoning from drugs. Although some people lead quite normal lives with the milder grades of heart-block, it may be said that in general, all permanent conduction disturbances are serious, since the milder types may be the beginning of the more definitely serious high grade blocks. The diagnosis of the electrocardiograms is based on sequence and time relations of the waves.

Increased A-V interval is the mildest type of auricular-ventricular block. The upper limits for normal auricular-ventricular conduction time is .2 of a second, therefore A-V intervals beyond this limit are delayed conductions. Graphic records are necessary to diagnose this condition and electrocardiograms show P-R intervals measuring more than .2 of a second.

Partial heart-block or dropped beats as they are often called, is a higher grade of block, and is a condition in which the ventricles do not respond to every auricular contraction because some of the impulses are unable to get by the region of faulty conduction. There may be only occasional "dropped beats" or they may be quite numerous and bear definite regular relations to the auricular contractions, coming every other beat, every third beat and so on. The milder grades of partial heart-block are usually easily diagnosed by auscultation over the heart and palpation of the pulse, but the higher grades are more difficult. They may be confused with sinus arthythmia, extrasystolic arhythmia, auricular fibrillation and sinus bradycardia. With the aid of electrocardiograms the diagnosis becomes quite easy. The records show a regular succession of auricular beats some not followed by ventricular beats. Some of the auricular systoles coincides with the ventricular systoles in which case the P waves will be found superimposed upon the R or T waves.

Complete heart-block is complete dissociation of auricles and ventricles, the ventricular pacemaker is different from that of the auricular, and is located somewhere below the block. Christian (I) states "as a rule, proof of complete heart-block depends on graphic methods of study, though clinically the diagnosis is one to be made with every probability of correctness when the rate is less than 40." Other clinical signs should be looked for such as, visible auricular pulsations in the neck vessels, audible auricular sounds heard when listening over the heart and the lack of ventricular response to exercise. Electrocardiograms show regular series of auricular waves and an entirely independent series of ventricular waves. When the auricular and ventricular contractions coincide the P waves may

be buried in the QRS complexes or superimposed upon the T waves.

Intraventricular Block occurs from conduction defects lying beyond the bifurcation of the His bundle, that is in either branch or their subdivisions. When there is a disturbance of conduction in the terminal branches it is spoken of as arborization block. Atrioventricular block causes no disturbance of sequence of auricular or ventricular contractions but alters the order in which the various parts of the ventricular muscle contracts. Bundle branch block may be transient or permanent and there are complete and incomplete types. Although there has appeared in the literature (3), (4), of late a few attempts to correlate physical signs and graphic methods, electrocardiograms continue to be our only reliable aid as a means of diagnosing intraventricular block. This is usually a very serious condition and frequently the only evidence obtainable of widespread myocardial damage. Electrocardiograms will vary, depending on whether there is complete, incomplete or arborization block. In complete block the chief changes are an increased time of the ventricular complexes of more than .1 of a second, notching of the QRS complexes and diphasic ventricular curves with T in the opposite direction to R. Incomplete bundle branch block curves show transitional forms between complete bundle branch block and normal curves. The diagnosis of arborization block curves depends on a long QRS interval, notching and low R waves and the absence of the diphasic character of the QRS complexes. The T waves are negative.

So-called Sino-Auricular Block need only to be mentioned since it is a very rare condition and is probably rarely an indication of serious heart disease. This condition is probably due to abnormal vagal tone although one theory assume that the impulses arise in the sinus and are blocked before they reach the auricular muscle. Electrocardiograms show complete standstill of both auricles and ventricles for periods a little less than two heart cycles.

Extrasystles as the name implies is an arhythmia caused by the heart contracting a little sooner than the regular beats; due to the heart responding to extra impulses discharged from some irritable point outside the usual pacemaker, which may be in the auricles, junctional tissues or ventricles. In young individuals extrasystoles seem to be of no great significance while in patients past middle life they may be forerunners of more serious arhythmias or evidence of myocardial changes especially if they arise from multiple foci. This type of arthythmia is usually easy to diagnose by general methods when the character and time relations of the extra beats are studied while listening over the heart and palpating the pulse. Any increase in heart rate usually causes premature beats to disappear unless there is a weak myocardium. Extrasystoles may occur only occasionally or they may be numerous and at regular intervals. Electrocardiograms clear up any confusion with other arhythmias, locate the point of origin whether single or multiple and furnish information regarding the state of the myocardium. In general electrocardiograms with auricular extrasystoles show inverted or altered P waves, normal ventricular complexes and the entire cycle premature. In nodal extrasystoles the auricular and ventricular waves of the premature cycles, will bear relations to each other as they do in nodal rhythm, depending on the point of their origin in the junctional tissue. The ventricular complexes in the electrocardiogram with ventricular extrasystoles are usually large bizarre deflections, diphasic in character and widened. The character of these curves varies as the point of origin of the impulses in the ventricles may vary. The P waves may or may not be seen at some phase of the cycle.

Simple Paroxysmal Tachycardia is a series of extrasystoles arising from some foci outside the usual pacemaker which is usually in the auricles but may be in the junctional tissues or ventricles. This condition is characterized by the rapid, constant regular rate of sudden onset and abrupt ending, the paroxysm lasting anywhere from a few minutes to several hours or days. The significance of this arhythmia is similar to extrasystoles, the paroxysms often occuring in apparently normal individuals and in those with diseased myocardiums. Vagus stimulation has no effect upon the rate but may stop the attack. Electrocardiograms are a valuable aid in the diagnosis of this form of tachycardia because they locate the sight of the impulse, distinguish between the three types and from other arhythmias. The complexes of the electrocardiogram have the appearance of rapid regular occurring extrasystoles.

Auricular Flutter is characterized by rapidly regular contracting auricles that average about 300 beats per minute; and because the conduction system is not able to conduct all the impulses at so rapid a rate, the ventricles usually respond to every second, third, or fourth auricular beat. This abnormal cardiac mechanism does not arise from the usual pacemaker but from a circus movement that has its origin somewhere in the auricles and spreads over them in an apparently definite and co-ordinate manner. Auricular flutter is a serious condition and Willius (5) states he has never seen this condition in the absence of organic heart disease and doubts its occurrence as a purely neurogenic phenomenon. The diagnosis is difficult without the aid of graphic record but may be suspected in certain instances when evidence of the rapid auricular contraction as compared with the slower and usually regular ventricular contractions is obtained. Other useful aids in diagnosis by general methods are determining the effects of stimulating the vagus and different forms of exercise upon the ventricular rate and rhythm. The characteristic features of electrocardiograms of pure auricular flutter are the rapid auricular or P waves of the same size, form and duration. The ventricular or QRS complexes usually occur at regular intervals of one-half the auricular rate but this varies depending upon the degree of block. The T waves are usually not visible.

Auricular Fibrillation is an arthythmia dependent upon circus contraction occurring at a much higher rate than that of auricular flutter; and because the course of the wave is not fixed but constantly changing this circus rhythm is irregular. The ventricular contractions are entirely irregular and the rate is usually quite rapid which however depends upon the degree of block at the auricular-ventricular node. This condition is the commonest of the serious cardiac arhythmias and although it may occur in paroxysmal attacks the majority of the cases seen are permanent. Auricular fibrillation sometimes occurs in apparently otherwise normal individuals, especially the paroxysmal type but its usual etiology is chronic valvular or myocardial disease and hyperthroidism. Thyriod disease should always be suspected when there is an auricular fibrillation that cannot be explained on the basis of myocardial disease. It is usually not hard to diagnose auricular fibrillation by general methods. The diagnostic findings are a gross irregularity of the pulse and a pulse deficit which means the apex rate is greater than the pulse rate. Anything increasing the heart rate increases the irregularity and auricular fibrillation is frequently associated with heart failure. Complications such as a slow ventricular rate, associated extrasystoles and several others make the diagnosis more difficult. Under these conditions the aid of the electrocardiograph becomes necessary. The characteristic features of the electrocardiograms are the complete absence of P waves because dynamic auricular contractions have ceased. Small rapid, irregular undulations are frequently present and probably represent the fibrillary waves of the auricles. The ventricular complexes represented by the QRS and T waves are very irregularily spaced and their amplitudes frequently vary.

Ventricular Fibrillation is probably due to the circus movement but this is hard to prove since the ventricles cease to contract co-ordinately and death follows in a few moments. This condition no doubt is a rather frequent cause of sudden death in patients with chronic heart disease. Electrocardiograms show in-co-ordinate undulations.

Pulsus Alternans is an irregularity of the force of contraction of the left ventricle so that the stronger and weaker beats alternate with each other in regular sequence. It is seen when the heart is laboring under great strain as in acute infectious diseases, and in late cases of cardiovascular renal disease. Kerr (6), states this condition indicates a grave prognosis. Pulsus alternans may be detected when taking the blood pressure or by graphic records of the arterial or cardiac impulses. Electrocardiograms are of little value in diagnosing this condition.

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DISCUSSION

DR. A. G. SULLIVAN, Hot Springs: This paper is very technical. Clinically I think it is possible that electrocardiograms are more important in cases of heart disease with regular rhythm than those with arythmias. If a man has heart disease with an irregular rhythm, the physician in charge fully realizes that he has a cardiac disability, but the man who has the anginal type of heart disease with vague substernal chest or epigastric symptoms with normal rhythm, normal blood pressure, and no definite cardiac findings, those are the individuals who need an electrocardiagram to determine the amount of myocardial involvement. The electrocardiogram will show as in some of the cases mentioned by Dr. Baskett, an interference in conduction below the A. V. nodes, in the ventricles themselves. After all it doesn't make very much difference what the auricles are doing. It is what the ventricles are doing and what reserve power they have and how long they can carry on. The electrocardiogram helps to answer those questions.

DR. BASKETT, in closing: I haven't anything to say.

Abstracts

CONTRACT PRACTICE

R. G. Leland, Chicago (Journal A. M. A., March 5, 1932), believes that although there are many details of contract practice which deserve much more detailed description and comment than is possible in his report, it may be stated that contract practice (1) took its origin largely from necessity; (2) has been legalized, in certain places, by state statute; (3) under certain conditions and in some forms is both ethical and legitimate; (4) in general, has become highly commercialized and competitive; (5) is largely limited to the payroll class; (6) does not, in most cases, extend its provision to women and children; (7) concerns itself, almost without exception, to curative medicine and does not include preventive measures; (8) shows no interest in public or individual welfare; (9) furnishes medical care which is often inferior in character; (10) in many instances is characterized by underbidding, subletting, misrepresentation and racketeering; (11) is economically unsound in many of its present forms; (12) is essentially sickness insurance usually not supervised or regulated; (13) is often used by the operators thereof to influence legislation in favor of extension of the plan; (14) in many of its present forms lowers the confidences of both the individual and the public in the medical profession; (15) has some features that deserve refinement and extension and others that are unethical and dangerous and should be abolished.

CONSERVATION IN TREATMENT OF MOVABLE KIDNEY

William F. Braasch, Rochester, Minn. (Journal A. M. A., Feb. 20, 1932), finds it difficult to form any definite opinion as to the value of the different types of operative technic advanced by various surgeons. One could easily be in doubt as to the best method of renal fixation, because of the many methods that have already been advanced. In fact, almost every surgeon who had performed a number of these operations has his own pet technic; usually the technic embodies the suggestions made by Albarran, Edebohls and others. It is common knowledge that in most cases in which the kidney has been operated on, secondary exploration will show that the kidney is firmly fixed by scar tissue, and secondary mobilization is quite difficult. On the other hand, the author has observed patients who claimed that renal fixation had been made elsewhere, and the kidney was just as mobile as it was supposed to have been before operation. It is evident, therefore, that when nephropexy has been done it is important to make urographic studies after operation in order to determine the results accomplished. Renal ptosis without urinary obstruction has no clinical significance and is seldom, if ever, the cause of symptoms. Renal obstruction as the result of ptosis can always be demonstrated by urographic or uroscopic examination, and operation is justifiable only in the presence of such evidence. In the majority of cases in which nephropexy has been done without previous demonstration of evidence of urinary stasis, the symptoms will return within one or two years following operation. Postoperative urographic examination is necessary to determine the permanence of normal renal position as well as improvement in drainage. The percentage of patients having nephroptosis who can be relieved of their symptoms by renal fixation will be comparatively small.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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Editorial

THE COMMITTEE ON MEDICAL LEGISLATION

Why do we need such a committee?

Because it is the first bulwark of defense and offense in political matters pertaining to the profession.

Its function is to anticipate and prepare the fight and then lead that fight, for or against such legislative questions as may arise regarding the practice of the healing arts.

It is not a new thing, this Committee on Medical Legislation. It has been in existence for several decades. It is responsible for all of the laws of our State governing the practice of medicine, as well as for the repeal of such other laws as were detrimental to public good.

Its one great objective is the preservation of the independence of medical practice to the end that the public may receive the greatest benefit from medical learning.

Its greatest enemy is the trend toward State Medicine. But there are others. Those who attack the Basic Science Law and instigate agitation to lower the standards of medical teaching are among the lesser enemies of our organization.

Your committee cannot carry these issues to a successful conclusion alone. It must have your help. It must have the whole-hearted co-operation of every member of the Arkansas Medical Society.

L. V. PARMLEY.
Chairman of Committee on Medical Legislation.

Personal and News Items

Dr. D. W. Goldstein of Fort Smith visited in Little Rock recently.

Dr. H. B. Hardy of Greenbrier visited in Little Rock last month.

Officers of the Columbia County Medical Society for 1932 are: President, W. H. Horn, Taylor: Secretary-Treasurer, P. M. Smith, Magnolia.

A State Conference on Child Health and Protection met in Little Rock, March 1. Dr. D. A. Rhinehart, President, Arkansas Medical Society, presided over the morning session.

Dr. Jerome S. Levy, Little Rock, has moved his office to 401 Donaghey Building, and announces his practice limited to Diagnosis and Treatment of Diseases of the Alimentary Tract.

Dr. Paul L. Mahoney of Little Rock and Dr. Louis Daily of Houston, Texas, spent a recent week end in St. Louis, the guest of Dr. Eugene Lee Myers who had arranged a clinic of interesting laryngeal conditions, among which was a laryngectomy.

Officers elected for the Miller County Medical Society for 1932 are: President, R. R. Kirkpatrick; Vice-President, H. E. Longino; Secretary-Treasurer, J. F. Williams; delegate to the State meeting, L. J. Kosminsky; alternate, L. H. Lanier.

The Lonoke County Medical Society elected the following officers for 1932: President, F. E. Utley, Cabot; Vice-President, S. S. Beaty, England; Secretary-Treasurer, O. D. Ward, England; Censor, E. A. Callahan, Carlisle; delegate to State Medical Society, J. B. Wells, Scott; alternate, W. B. Crowgey, Scott.

At a meeting of the Chicot County Medical Society held at Lake Village, February 11, 1932, the following officers were elected: President, E. Baker, Dermott; Secretary-Treasurer, S. W. Douglas, Eudora; delegate to State Society, W. A. Craig, Eudora; alternate, S. W. Douglas, Eudora.

An added feature of the activities of the Kansas City Southwest Clinical Society will be symposia on vital medical subjects to be presented each spring in Kansas City, Missouri.

The 1932 meeting will be a Heart Symposium to be held April 19th and 20th at two of the allied hospitals. This course will be a full two-day one, consisting of thirty-two half-hour classes conducted by members of the society who have specialized on this subject. A complete picture of heart diseases will be presented together with patient demonstration, electrocardiograms and X-Ray plates of various heart conditions. This symposium has been made possible without charge to the visiting doctors through the various activities of the society.

Whereas, The Washington County Medical Society, in regular session at Fayetteville, on the second day of February, 1932, having brought to its attention some of the splendid work done by our prosecuting attorney in enforcing the laws of our State against the irregularities and quack practice of medicine in this judicial district; and,

Whereas, it has come to the attention of this society that there are a number of practitioners who are unlawfully and fraudulently practicing medicine under assumed names or using a license which belong to physicians who are now dead; therefore,

Be It Resolved, that this county organization go on record as endorsing the action of the Hon. James Trimble, prosecuting attorney, for this district, for the splendid way in which he is endeavoring to prosecute the irregularities and oust the fraudulent practitioners of medicine, and we hereby unreservedly pledge our sincere co-operation.

The Arkansas Region Fracture Committee of the American College of Surgeons, one of three similar committees for this State, Mississippi and Tennessee, was formed February 8, at Memphis, at a regional meeting of the American College of Surgeons.

Dr. Preston Hunt of Texarkana was named chairman and Dr. Joe Shuffield, Little Rock, secretary. Other members of the new group include Dr. F. Walter Carruthers and Dr. W. F. Smith, Little Rock; Dr. J. K. Smith, Texarkana, and Dr. Fred W. Krock, Fort Smith. This committee plans to conduct an educational campaign, beginning almost immediately, on the early treatment of injuries.

Lectures by representative specialists will include radio talks, hospital demonstrations and other methods for teaching the work among ambulance drivers, police, State highway patrolmen, firemen, railroad employees, construction workers and in the schools.

THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next written examination of the board will be held in nineteen (19) different cities of the United States and Canada at 2:00 p. m. on Saturday, March 26, 1932. The general, oral and clinical examination will be held in New Orleans on Tuesday, May 10, 1932, immediately preceding the meeting of the American Medical Association. Reduced railroad fares will be available. For detailed information and application blanks apply to the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pennsylvania.

Among the membership list of the American Board of Obstetrics and Gynecology we find the name of Dr. S. B. Hinkle of Little Rock, as having successfully passed their examination and has received the diploma of the board which certifies that he has been duly accredited on the basis of specialization and proficiency.

THIRD DISTRICT MEDICAL SOCIETY

The Third District Medical Society met in Stuttgart, March 22, 1932, at 3:00 p. m. Officers for the Society are: President, S. A. Drennen, Stuttgart; Vice-President, Thomas Wilson, Wynne; Secretary-Treasurer, J. O. Rush, Forrest City.

The program follows:

Afternoon Session

"The Care of the Soft Parts After Delivery"—Dr. S. B. Hinkle, Little Rock.

Business Session.

Evening Session

Dinner—Riceland Hotel.

"A moving Picture Study of the Heart Action in Health and Disease"—Dr. Lyle Motley, Memphis, Tenn.

"The Problem of Prostatic Observation, Its Modern Management"—Dr. Thos. D. Moore, Memphis, Tenn.

FOURTH DISTRICT MEDICAL SOCIETY

(Reported by W. T. Lowe, Secretary)

The second meeting of the Fourth District Medical Society met at Monticello, March 1, at 2:30 p. m. The meeting was called to order by the President, Dr. J. S. Wilson. Minutes of the previous meeting were read and approved.

Those present were: Wilson, Gates, Cotham, Duckworth, Pope, Kimbro, Debolt, and Collins of Monticello; Rhinehart, Parmley, Carruthers, Calcote and Caldwell of Little Rock; Payne and Eubanks of Greenville, Miss.; Douglas and Craig of Eudora; Chenault, Smith and Grayson of McGehee; Gill, Crump, Cunningham, Lowe, Lemon and Hughes of Pine Bluff; Hartsell of Warren; Watts of Dumas, Barlow of Dermott; Dixon of Gould; Burge of Lake Village and Kimbro of Tillar.

The Society was welcomed to Monticello by the Mayor.

Dr. D. A. Rhinehart, President, Arkansas Medical Society, made an address. This was followed by a paper, "The Relation of the Physician to the Public, the Patient, and to Each Other," by Dr. E. E. Barlow of Dermott. A motion was carried that this paper be sent to the Secretary, Arkansas Medical Society, to be printed in the Journal.

Dr. C. K. Caruthers of Pine Bluff read a paper on "Anesthesia."

Dr. L. V. Parmley made a short talk on the "Future Outlook of the Practice of Medicine and the Care of Ex-Soldiers by the Present Government." After a free discussion, the Fourth District Medical Society went on record as advocating the Shoulders' plan of care for the ex-soldier.

Auxiliary Notes

An auxiliary to the Ouachita County Medical Society was organized February 4, 1932. Officers elected were: President, Mrs. R. B. Robins, Camden; Vice-President, Mrs. J. P. Clemens, Mount Holly; Secretary, Mrs. S. D. McGill, Camden.

The Faulkner County Auxiliary met with Mrs. I. N. McCollum, Conway, February 16. Mrs. W. R. Brooksher, Jr., Fort Smith, State President of the Woman's Auxiliary was present and discussed the work and plans for the

year. The hostess served a delicious salad plate during the social hour.

The Woman's Auxiliary to the Pulaski County Medical Society entertained with a progressive dinner, Friday, February 19, in honor of their husbands. The first course was served at the home of Mrs. D. A. Rhinehart, president of the auxiliary. Her young son, Billy, in Colonial costume, served as doorman. The guests were received by Dr. and Mrs. Rhinehart and members of the entertainment committee, who included Mrs. M. J. Kilbury, Mrs. Homer Scott, Mrs. R. C. Kory, Mrs. R. M. Eubanks, Mrs. A. C. Shipp, Mrs. W. L. Sadler, Mrs. F. Walter Carruthers and Mrs. H. Fay H. Jones. The second course was served at the Peacock tearoom. The final stop was made at the home of Dr. and Mrs. W. F. Smith, where delicious ices and cakes, carrying out the Washington birthday theme, were served. More than eighty-five auxiliary members and their guests attended the affair.

Obituary

PRICKETT, CHARLES—Dr. Charles Prickett of Malvern, aged 54, died February 23, 1932. He was returning from a professional call when he was stricken and died before medical aid arrived.

Dr. Prickett is survived by his wife, a daughter, Miss Annette Prickett, student in Christian College, Columbia, Mo.; two sons, Mahlon Prickett, student in the University of Arkansas School of Medicine, Little Rock, and Norris Prickett of Malvern, several sisters and brothers.

VAUGHAN, WILLIAM E.—Dr. W. E. Vaughan of Richmond, aged 62, died February 27, 1932. He was reared in Morrilton and moved to Little River County thirty years ago, where he engaged in the practice of his profession until four months ago, when he was forced to retire on account of ill health. Surviving are his wife, one brother, Wade Vaughan of Kansas City and one sister, Mrs. Mayo Robertson of Ashdown.

IN MEMORY OF DR. W. E. VAUGHAN

W. W. Work, M. D.

Dr. W. E. Vaughan was born at Springfield Arkansas, November 10, 1870. He died at the home of Mr. and Mrs. Mayo Robertson at Ashdown, Arkansas, February 27, 1932. Aged 61 years, 3 months and 17 days. He is survived by his sister, Mrs. Mayo Robertson of Ashdown; two step-sons, Burton K. Walker of Ashdown and John S. Walker of Alexandria, Louisiana, and one brother, Wade Vaughan of Kansas City, Missouri.

Dr. Vaughan was well qualified for his profession by education, temperament and character. In addition to a good High school training of his day, he was a graduate of the Medical College of Louisville, Kentucky, and he kept well abreast of the times in his profession by reading and study.

Dr. Vaughan first began the practice of his profession at Horatio in Sevier County, Arkansas, and then moved to Richmond, Little River County, in the year of 1900.

When the Little River Medical Society was organized on April 28th, 1904, the following were charter members: A. N. Wood, John M. Dunn, W. L. Shirey, S. C. Marr, W. E. Vaughan, J. W. Ringgold, M. A. Bizzell and W. W. York. At the first meeting Dr. Vaughan was elected secretary-treasurer, which office of honor and trust he held continuously until his death, with honor and credit to himself and his profession.

Dr. Vaughan was quiet and unassuming in his manner; chaste and pure in his speech and private life. When he spoke, he commanded the respect of his profession. He was clean and honest in his professional life, and his patients had the highest esteem for him and confidence in his judgment. He was never known to speak harshly to his brother physicians.

Dr. Vaughan had many friends in his community of Richmond, where he lived so long, and as evidence of this fact many of them attended his funeral. He will be missed by those whom he served as well as by the members of his profession. It may be said of him as Shakespeare has one of his characters to say to another:

> "His life was gentle; and the elements were so mixed in him
> That Nature might stand out and say to all the world: 'He was a man'."

County Societies

CLAY COUNTY

(Reported by J. E. McGuire, Sec.)

The Clay County Medical Society met in the banquet hall of the Baptist Church, at Rector, February 24, 1932. Dinner was served by the ladies of the church.

Druggists and dentists from Kennett, Mo., Marmaduke, Paragould and Rector were invited guests of the society.

Members present were: F. H. Jones, J. E. McGuire, Geo. Cohn, E. W. Thornton and L. W. Brannan of Piggott; J. P. Hiller of Pollard, M. C. Richardson of Corning, and W. O. Parrish of Rector.

President Parrish presented Dr. John H. Hinemon who extended a cordial welcome to the visitors.

Informal addresses were made by Dr. Paul Baldwin, Kennett; Ex-Senator O. S. Harrison, Kennett; Dr. G. C. Jernigan, dentist, Rector; Dr. J. T. Rigdon, Kennett; Mr. J. H. Dummier, druggist, Kennett; and Dr. J. C. Mills, dentist, Kennett. Public Health Service was discussed by Dr. Wheeler Davis, County Health Officer of Dunklin County, Missouri, and Dr. M. Outlaw, County Health Officer of Clay County, Arkansas.

President W. O. Parrish read a carefully prepared and able paper on State Medicine, which led to a general discussion of public health school inspection and sanitation and preventive medicine in general.

OUACHITA COUNTY

(Reported by R. B. Robins, Sec.)

The Ouachita County Medical Society held its Annual Ladies' Night meeting, February 4th, at the Orlando Hotel, Camden. There was an attendance of thirty-five. A banquet and delightful musical entertainment and dancing preceded the program.

The program follows:

"Hospitals and Patients"—Mrs. Gilberta Snow, Superintendent of the Camden Hospital.

"The Doctor's Wife and His Profession"—Dr. A. G. Harrison, Searcy.

Address—Mrs. W. R. Brooksher, Jr., Fort Smith, President of the Woman's Auxiliary, Arkansas Medical Society.

Address—Dr. D. A. Rhinehart, Little Rock, President, Arkansas Medical Society.

After the meeting, the ladies organized an Auxiliary to the Ouachita County Medical Society with the following officers: Mrs. R. B. Robins, Camden, President; Mrs. J. P. Clemens, Mount Holly, Vice-President; Mrs. S. D. McGill, Camden, Secretary.

OUACHITA COUNTY

(Reported by R. B. Robins, Sec.)

The Ouachita County Medical Society held its regular monthly meeting March 3, at 7:00 p. m. at the Ouachita Hotel in Camden. Drs. Rinehart and Early of Camden were hosts to the society. A banquet was served and musical entertainment was furnished. Twenty physicians were present.

The following program was rendered:

"The Value of Gynecological Examination"—Dr. M. C. Hawkins, Little Rock.

"Traumatic Brain and Skull Injuries"—Dr. Walter F. Carruthers, Little Rock.

An invitation from Dr. Carruthers was extended to the Ouachita County Medical Society to attend a "Ouachita County Night" meeting of the Pulaski County Medical Society in June. The invitation was accepted by the society.

Officers elected were:

President, J. B. Jameson, Camden; Vice-President; T. E. Rhine, Thornton; Secretary, R. B. Robins, Camden; delegate to the State meeting, R. B. Robins, Camden; alternate, J. P. Clemens, Mount Holly.

Resolutions were passed endorsing a proposed legislative act to regulate the sale of hypnotic drugs which was presented by Dr. R. B. Robins and the secretary was instructed to refer the matter to the legislative committee of the Arkansas Medical Society for consideration.

The proposed legislative act follows:

A PROPOSED ACT to regulate the sale of hypnotic drugs.

Be it enacted by the General Assembly of the State of Arkansas:

Section 1. In the following sections the word "hypnotic drug" includes: barbital and any derivative thereof; diethylbarbituric acid; any alkyl, aryl, metallic or halogenated derivative of barbituric acid; veronal; sulphonal; trional; proponal; ipral; dial; neonal; sandoptal; amytal and its salts; luminal;

phandorn; noctal; allonal; medinal; or any of the foregoing by whatsoever trade name or designation; or any compound, preparation or solution thereof possessing hypnotic properties and effects. Chloral hydrate or any mixture or solution thereof containing twenty grains or more thereof to the fluid ounce.

Section 2. No person other than a licensed pharmacist shall sell or offer to sell hypnotic drugs to consumers or have hypnotic drugs in his possession with intent to sell it to consumers.

Section 3. No person shall sell hypnotic drugs to a consumer except on a written prescription of a doctor of medicine, doctor of dental surgery, or a doctor of veterinary surgery, lawfully practicing his profession in this state.

Section 4. Nothing in this act shall be construed to limit the sale of hypnotic drugs to, nor the dispensing of hypnotic drugs in the course of their professional practice by, doctors of medicine, doctors of dental surgery, and doctors of veterinary surgery, lawfully practicing their respective professions in this State, or to registered retail and wholesale pharmacists, or to hospitals or other institutions for the treatment of defective, afflicted, sick and injured persons.

Section 5. Any person who shall violate any of the provisions of this act shall be punished for the first offense by a fine of not less than ten dollars nor more than one hundred dollars and for any subsequent offense by a fine of not less than one hundred dollars nor more than five hundred dollars.

Correspondence

(Reply to an article on "Savor of Mothers, etc." in a recent issue of The Ladies' Home Journal, by the Committee on Public Relations, Pulaski County Medical Society, Little Rock, Ark.)

March 14, 1932.

Mr. Loring A. Schuler, Editor
Ladies Home Journal
Philadelphia, Pennsylvania

Dear Mr. Schuler:

Your letter of January 21, addressed to the President of the Pulaski County Medical Society in Little Rock, Arkansas, has been referred to the Committee on Public Relations for consideration and reply.

This Committee and the members of our Society are cognizant of the high mortality rate among child-bearing mothers in the United States. We are also aware of the fact that a large percentage of this mortality is preventable. Naturally, we will lend our support and encouragement to any well advised procedure that looks to its reduction. We do not deem it expedient to pass resolutions favoring this program, but we will in reply to your inquiry make this statement with reference to our attitude.

We commend the publishers and editor of the Ladies' Home Journal for interesting themselves in a campaign to reduce maternal mortality in the United States. We believe that a non-medical organization such as yours will have more influence than a medical one. For some reason that we cannot explain, unfortunately too many lay people look upon any suggestion from the medical profession as being selfish in nature and designed only to help the doctors' business. Your work must of necessity be of an educational nature. We would suggest that all of it have the approval of competent medical authority for only by so doing will it have the wide endorsement of medical men in this country.

However, we cannot approve in its entirety of the article, "Savor of Mothers," in the March issue of The Ladies' Home Journal, nor do we believe it will have the approval of physicians elsewhere. We think this article is in part contradictory, that it contains half-truths and untruths, that it is unnecessarily sensational, and that instead of encouraging expectant mothers to consult conscientious physicians, it will have the opposite effect and cause distrust of the medical profession as a whole. Assuming that the historical statement of Dr. Semmelweiss' struggles for recognition are correct, and we believe in the main it is, the judicious use of your editorial blue pencil or, preferably, of one in the hands of an old, wise, and experienced obstetrician would have made this article a very valuable beginning of the campaign you contemplate.

In the paragraph at the heading of the article, to the left of Dr. Semmelweiss'' picture, we particularly object to the use of the word "murder." Our dictionary defines murder as "the offense of unlawfully killing a human being with malice aforethought." In this paragraph it is said: "Yet, today

in America one out of eighteen mothers is killed every year." In the fourth paragraph of the article: "That, today, kills one out of eighteen of all American married women dying between the ages of 15 and 45." These statements are contradictory for both of them cannot be correct. We do not know the source of these figures, so we cannot verify their accuracy. The article definitely leaves the inference, whether or not intended, or true, that this entire death rate is due to child-bed fever.

The concluding two portions of this article, Nos. 9 and 10, are particularly objectionable. In the ninth section, the author infers that Dr. DeLee has said that the maternity ward of a general hospital is a dangerous place for a woman to have a baby. We have not looked for this in the writings of Dr. DeLee and we wonder just when he made this statement. This is a reflection on all general hospitals and will tend to discourage women from using the facilities and the equipment of general hospitals for this purpose. It is agreed that special lying-in hospitals are better for this purpose than general hospitals, but who will provide such for American mothers?

The concluding section is more obnoxious. Superficially read, as it will be in a majority of instances, it definitely leaves the idea that the ignorance and carelessness of physicians and hospitals are the cause of all deaths occurring in child-birth. Of course, it suggests that these be checked, but the mere fact of an investigation, by those without authority and without expert information, would, in gossipy women's clubs, be tantamount to conviction.

Worst of all is the implied suggestion that women boycott physicians or hospitals who had been so unfortunate as to be caring for a woman who died in child-birth. At least, the ethics of such a suggestion seems to us to be reprehensible.

We are all of the opinion that the maternity department of a general hospital now is a good place for a woman to be confined. To satisfy ourselves as to this belief, we have investigated the mortality rate in one of the three general hospitals in Little Rock. This hospital was selected because the records of the institution cover a longer period of time than in the other two general hospitals. We do not believe that this is an exception institution; we think it to be representative of those of the same size and class throughout the country.

In a ten-year period, 1922 to 1931 inclusive there have been 2,528 deliveries in this hospital, including 80 deliveries by Caesarian section. The total number of deaths of mothers was 19, .75 per cent, or 1 to each 133 deliveries. Two of these were from child-bed fever, a death rate of .08 of one per cent, or 1 in 1,264 deliveries. One of these mothers died in 1922; the other in 1928. This is quite a contrast to the death rate of 1 in 18 repeated so often in "Savor of Mothers."

Thirteen of the deaths were due to eclampsia. Some of these could have been prevented had these patients had adequate medical care during pregnancy. This suggests that The Ladies' Home Journal can do most good by advising women of the importance of medical care beginning as soon as pregnancy is suspected.

The Members of this Committee, individually and collectively, have long been admirers of The Ladies' Home Journal. We believe it to be the most important educational institution for women in America today. We urge the Journal to continue its program for the education of women that maternal and infant death rates be lowered. This, however, should be done in a way that physicians may give it their approval and support.

Very truly yours,
Pulaski County Medical Society
Public Relations Committee.

To the Oregon Auxiliary goes the prize for the best slogan, for at their "Stunt Dinner" the following one was suggested "Doctor's Lives Need Doctor's Wives," and also their How Do You Do? is well worth printing.

Some pay their dues when due,
Some when over due,
Some never do,
How do you do?

—*Exchange.*

Book Reviews

The Surgical Clinics of North America. (Issued serially, one number every other month.) Volume 10, No. 6. Index Number. (Philadelphia Number, December, 1930). 316 pages with 95 illustrations. Per Clinic year (February, 1930 to December, 1930). Paper, $12.00; Cloth, $16.00. Published by W. B. Saunders Company, Philadelphia.

The first article in this edition is by the late Dr. John B. Deaver on "Clinical Lecture on Cancer of the Rectum." He states, "The predominate type of cancer of the rectum is adenocarcinoma of the papilliferous or the adenoid or the mucoid variety, the frequency being in the order named. Each of these three varieties may occur at any of the sites: the rectosigmoid, the ampulla, the anal canal (in which cancer develops), and each variety at one or the other site presents certain characteristic features that help to establish the diagnosis. It is a general observation that the most frequent site of rectal cancer is at the rectosigmoid junction. A tumor at this site, especially if papilliferous, rapidly involves the entire circumference of the bowel and produces stenosis. It also causes profuse mucous secretion, often suggesting a mucous colitis, and attacks of progressively increasing diarrhea, occasionally with blood-tinged stools. The diarrhea gradually subsides and is followed sooner or later by symptoms of obstruction due to intussusception of the stenosed portion of the bowel or impacted feces above the stenosis. Pain is not apt to be present."

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Preliminary Program & Announcements

OF THE

FIFTY-SEVENTH ANNUAL SESSION OF THE

ARKANSAS MEDICAL SOCIETY

LITTLE ROCK

April 5, 6, 7, 1932

HEADQUARTERS—HOTEL MARION

OUR PRESIDENT

DARMON A. RHINEHART, M. D.
Little Rock
President, Arkansas Medical Society, 1931-1932

OUR GUESTS

H. S. Crossen, St. Louis, Missouri.
A. E. Hertzler, Kansas City, Kansas.
Chaille Jamison, New Orleans, Louisiana.
J. M. Martin, Dallas, Texas.
W. H. Olmstead, St. Louis, Missouri.
Mrs. A. B. McGlothlan, St. Joseph, Missouri.

OFFICERS

President—D. A. Rhinehart, Little Rock.
President-Elect—Will H. Mock, Prairie Grove.
First Vice-President—L. J. Kosminsky, Texarkana.
Second Vice-President—Wm. A. Snodgrass, Little Rock.
Third Vice-President—A. Isom, Dumas.
Treasurer—M. J. Kilbury, Little Rock.
Secretary—Wm. R. Bathurst, Little Rock.

COUNCILORS AND COUNCILOR DISTRICTS

First District—Clay, Crittenden, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties. Councilor, W. M. Majors, Paragould. Term of office expires 1933.

Second District—Cleburne, Fulton, Independence, Izard, Jackson, Sharp and White Counties. Councilor, L. T. Evans, Batesville. Term of office expires 1932.

Third District—Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis and Woodruff Counties. Councilor, M. C. John, Stuttgart. Term of office expires 1933.

Fourth District—Ashley, Bradley, Chicot, Cleveland, Drew, Desha, Jefferson and Lincoln Counties. Councilor, H. T. Smith, McGehee. Term of office expires 1932.

Fifth District—Calhoun, Columbia, Dallas, LaFayette, Ouachita and Union Counties. Councilor, L. L. Purifoy, El Dorado. Term of office expires 1933.

Sixth District—Hempstead, Howard, Little River, Miller, Nevada, Pike, Polk and Sevier Counties. Councilor, C. A. Archer, DeQueen. Term of office expires 1932.

Seventh District—Clark, Garland, Grant, Hot Springs, Montgomery, Saline and Scott Counties. Councilor, Dewell Gann, Sr., Benton. Term of office expires 1933.

Eighth District—Conway, Faulkner, Johnson, Perry, Pope, Pulaski and Yell Counties. Councilor, M. E. McCaskill, Little Rock. Term of office expires 1932.

Ninth District—Baxter, Boone, Carroll, Marion, Newton, Searcy, Stone and Van Buren Counties. Councilor, D. L. Owens, Harrison. Term of office expires 1933.

Tenth District—Benton, Crawford, Franklin, Logan, Madison, Sebastian and Washington Counties. Councilor, S. J. Wolfermann, Fort Smith. Term of office expires 1932.

Delegates to the A. M. A.—William R. Bathurst, Little Rock (1933), E. F. Ellis, Fayetteville (1932).

COMMITTEES

SCIENTIFIC PROGRAM

R. J. Calcote, Chairman, Little Rock; W. R. Brooksher, Jr., Fort Smith; Wm. R. Bathurst, Little Rock.

SCIENTIFIC EXHIBIT

Herbert Moulton, Chairman, Fort Smith; M. J. Kilbury, Little Rock; David Levine, El Dorado; W. E. Gray, Jr., Little Rock.

MEDICAL LEGISLATION

L. V. Parmley, Chairman, Little Rock; H. B. Hardy, Greenbrier; C. S. Holt, Fort Smith; M. L. Norwood, Lockesburg; E. B. Swindler, Stuttgart; L. M. Lile, Hope; J. C. Land, Walnut Ridge; C. H. McKnight, Brinkley.

HEALTH AND PUBLIC INSTRUCTION

C. W. Garrison, Chairman, Little Rock; J. S. Moore, Arkadelphia; J. S. Jenkins, Pine Bluff; J. B. Jameson, Camden; E. J. Munn, El Dorado.

NECROLOGY

E. E. Barlow, Chairman, Dermott; W. V. Laws, Hot Springs; S. J. Hesterly, Prescott; Dewell Gann, Sr., Benton; E. F. Brewer, Augusta.

CANCER CONTROL

Dewell Gann, Jr., Chairman, Little Rock; D. W. Goldstein, Fort Smith; A. G. Harrison, Searcy; E. F. Ellis, Fayetteville; J. S. Wilson, Monticello.

INFANT WELFARE

Don Smith, Chairman, Hope; H. W. Browning, Little Rock; T. G. Porter, Hazen; O. R. Kelly, Sheridan.

HOSPITALS

M. E. McCaskill, Chairman, Little Rock; R. H. Huntington, Eureka Springs; A. S. Buchanan, Prescott; R. B. Robins, Camden; S. J. Wolfermann, Fort Smith.

DISEASES OF THE HEART

A. G. Sullivan, Chairman, Hot Springs; A. C. Shipp, Little Rock; A. A. Blair, Fort Smith; N. F. Weny, Little Rock; H. A. Ross, Arkadelphia.

PUBLICITY

C. E. Dungan, Chairman, Augusta; H. H. Atkinson, Fordyce; E. V. Dildy, Nashville; H. T. Smith, McGehee; B. D. Luck, Pine Bluff.

ANNOUNCEMENTS

REGISTRATION

The registration desk will be located in the Marion Hotel and open from 8:00 a. m. to 5:00 p. m.

The delegates are requested to register as early as possible, so that the official roll of the House of Delegates may proceed with its business, beginning promptly at 9:30 a. m. Members and visiting ladies are also requested to register and receive the official badge and program.

The members of the Woman's Auxiliary will also please register and receive a program and the official badge of their organization.

All meetings will be held in the Hotel Marion.

MEETING OF COUNCIL

The Council of the Arkansas Medical Society will meet at noon each day with luncheon in the private dining room, Hotel Marion, immediately following the adjournment of the morning sessions.

COMMERCIAL EXHIBIT

A number of high-class commercial exhibits will be on display in the Hotel Marion, near the place of registration, and our members are urged to visit this interesting exhibit.

SCIENTIFIC EXHIBIT

H. Moulton, Chairman

This Scientific Exhibit will be displayed in the Marion Hotel, conveniently accessible to those in attendance.

The exhibit will be as follows:

Carcinoma of the Cardiac End of the Stomach with a Co-existing Perforating Ulcer of the Fundus—Allan A. Gilbert, Fayetteville.

Multiple Fibroid of the Uterus Containing a Six Weeks Pregnancy. Ovum Intact—J. A. Foltz, Sparks Memorial Hospital, Fort Smith.

Skeletal Syphilis—S. J. Wolfermann and D. W. Goldstein, Cooper Clinic, Fort Smith.

Carcinoma of Cervix Uteri—W. F. Rose, Fort Smith.

Intra Ocular Tumors. Mounted. Gross Specimens —H. and E. C. Moulton, Fort Smith.

Human Infestation with Dog Tapeworm. Taenia Canina—Walter G. Eberle, Fort Smith.

Bantis Disease. Pathological Specimen—E. F. Ellis and Allan A. Gilbert, Fayetteville.

Carcinoma of the Ascending Colon. Pathologic Specimen and X-Ray—C. B. Callen, Fayetteville.

Spontaneous Pneumothorax. X-Ray Studies—Allan A. Gilbert, Fayetteville.

Exhibit of Gross Specimens from the Missouri Pacific Hospital—M. J. Kilbury, Little Rock.

Exhibit of Gross Specimens from St. Vincent's Infirmary—M. J. Kilbury, Little Rock.

Gastro-intestinal Malignancies, X-Ray Studies— W. E. Gray, Jr., Little Rock.

A New Nasal Tube—R. B. Robins, Camden.

Aneurysm of the Abdominal Aorta—Hugh Johnson, Fort Smith.

X-Ray Films of Flowers—W. R. Brooksher, Jr., Fort Smith.

X-Ray Films of Intravenous Pyelograms, and of Bone Diseases—F. H. Krock, Fort Smith.

Malignancies of the Orbit—K. W. Cosgrove, Little Rock.

Specimens of Injured Spinal Cord on Fractured Vertebras—L. V. Parmley, Little Rock.

A New Type of Plastic Cast Shell for Compression Fractures of the Spine—L. V. Parmley, Little Rock.

Exhibit from the City Hospital—Fount Richardson, Fayetteville.

Exhibit by Committee on Diseases of the Heart—A. G. Sullivan, Chairman, Hot Springs.

HOUSE OF DELEGATES

First Meeting, Hotel Marion, April 5, 9:30 A. M.

Meeting called to Order by D. A. Rhinehart, President.

Calling roll of Delegates.

Appointment of Credentials Committee and their report.

Adoption of the Minutes of the Fifty-sixth Annual Meeting as published in the July, 1931, issue of the Journal of the Arkansas Medical Society.

Appointment of Reference Committee.

President's Address to the House of Delegates.

REPORT OF COMMITTEES

Arrangements—S. B. Hinkle, Chairman.

Scientific Program—R. J. Calcote, Chairman.

Scientific Exhibit—Herbert Moulton, Chairman.

Report of our Legal Advisor—Hon. Peter A. Deisch.

Medical Legislation—L. V. Parmley, Chairman.

Necrology—E. E. Barlow, Chairman.

Publicity—C. E. Dungan, Chairman.

Cancer Control—Dewell Gann, Jr., Chairman.

Infant Welfare—Don Smith, Chairman.

Hospitals—M. E. McCaskill, Chairman.

Health and Public Instruction—C. W. Garrison, Chairman.

Diseases of the Heart—A. G. Sullivan, Chairman.

Report of the Council—Dewell Gann, Sr., Chairman.

Report of the State Board of Medical Examiners—Sam J. Allbright, Secretary.

Report of the Delegates to the A. M. A.

Report of the Treasurer.

Report of the Secretary.

New Business.

PROPOSED CHANGE IN THE CONSTITUTION AND BY-LAWS:

The last two lines in Article V, page 3, shall read: that the Ex-Presidents shall have the power of voting on all subjects except the election of officers.

Selection of the Nominating Committee

GENERAL SESSION

(Joint Meeting with the Woman's Auxiliary to the Arkansas Medical Society)

Hotel Marion

Tuesday, April 5, 1:15 P. M.

Calling the Society to Order—D. A. Rhinehart, President.

Invocation—Rev. Paul W. Quillian, Pastor Winfield Memorial Methodist Church.

Address of Welcome—Honorable Harvey Parnell, Governor of Arkansas.

Address of Welcome for Little Rock—Honorable H. A. Knowlton, Mayor of Little Rock.

Address of Welcome for the Profession—H. Fay Jones, President, Pulaski County Medical Society.

Address of Welcome on Behalf of the Woman's Auxiliary—Mrs. E. H. White, Little Rock.

Response to the Address of Welcome on Behalf of the Arkansas Medical Society—A. G. Harrison, Searcy.

Response to the Address of Welcome on Behalf of the Woman's Auxiliary—Mrs. W. G. Hodges, Malvern.

Introduction of the President of the Woman's Auxiliary to the American Medical Association—Mrs. A. B. McGlothlan, St. Joseph, Mo.

Introduction of the President to the Woman's Auxiliary to the Southern Medical Asssociation—Mrs. Chas. E. Oates, Little Rock.

Introduction of the President of the Woman's Auxiliary to the Arkansas Medical Society—Mrs. W. R. Brooksher, Jr., Fort Smith.

Introduction of the President of the Woman's Auxiliary to the Pulaski County Medical Society—Mrs. D. A. Rhinehart, Little Rock.

The Medical Profession, the Auxiliary and the Public—Mrs. A. B. McGlothlan, St. Joseph, Mo., President of Woman's Auxiliary to the American Medical Association.

Annual Address—D. A. Rhinehart, Little Rock, President of the Arkansas Medical Society.

SCIENTIFIC SESSION

"Aortic Regurgitation"—Chaille Jamison, New Orleans, La.

"Syphilitic Bursopathy of Verneuil"—D. W. Goldstein, Fort Smith.

"Report of An Unusual Surgical Case"—W. T. Lowe, Pine Bluff.

"Indications for Surgical Treatment of Tuberculosis"—F. H. Krock, Fort Smith.

"The Kline Test for Syphilis"—Euclid Smith, Hot Springs.

"Treatment of Anginal Heart Failure"—Arthur G. Sullivan, Hot Springs.

PRESIDENT'S RECEPTION
Hotel Marion
Tuesday, April 5, 9:00 P. M.

Musical Entertainment.

Dancing.

MEMORIAL SESSION

HOTEL MARION
Joint Meeting with the Auxiliary
Wednesday, April 6, 8:30 A. M. to 9:30 A. M.

Committee on Necrology—E. E. Barlow, Dermott, Chairman; W. V. Laws, Hot Springs; S. J. Hesterly, Prescott; Dewell Gann, Sr., Benton; E. F. Brewer, Augusta.

Calling of Meeting to Order—President Rhinehart.

Invocation—Reverend Calvin B. Waller, Pastor of Second Baptist Church.

Music.

Address—E. E. Barlow, Dermott.

Music.

DECEASED MEMBERS

Julius Kelly Sheppard, El Dorado, May 12, 1931.
John L. Butler, Sheridan, June 13, 1931.
John E. Guthrey, El Dorado, June 6, 1931.
Roscoe T. Gephart, Cotton Plant, June 24, 1931.
John R. Cunning, Lonoke, July 18, 1931.
Harry Eugene Williams, Jr., Pine Bluff, August 22, 1931.
Henry Thibault, Scott, September 15, 1931.
William Preston Gardner, Texarkana, October 10, 1931.
Harlan H. Smith, Calico Rock, October 14, 1931.
James H. Higgins, Altus, October 16, 1931.
William Henri DeClark, McGehee, October 30, 1931.
Benjamin C. Logan, Morrilton, October 31, 1931.
Edward Melton Pemberton, Little Rock, November 20, 1931.
Charles M. Routh, Harrison, November 27, 1931.
Arch Sylvester Chapman, Fort Smith, December 22, 1931.
William Enoch Jones, Little Rock, December 25, 1931.
Zilliba L. Kirkham, Little Rock, December 29, 1931.
William Edward Gray, Sr., Little Rock, January 10, 1932.
Julius Sheppard Moore, Arkadelphia, January 27, 1932.
William M. Moore, Arkadelphia, February 4, 1932.
William R. Reves, Alma, February 7, 1932.
Charles Prickett, Malvern, February 23, 1932.
William E. Vaughan, Ashdown, February 27, 1932.

SCIENTIFIC SESSION

MORNING SESSION
Hotel Marion
Wednesday, April 6—10:00 A. M.

"Cysts of the Antrum"—T. E. Fuller, Texarkana.

"The Ophthalmologist's Inheritance"—O. H. King, Hot Springs.

"Headaches in Relation to the Eye, Ear, Nose and Throat"—Grace Tankersley, Pine Bluff.

"Cutaneous Blastomycosis"—Roy Millard, Dardanelle.

"Where Are We Going"—Geo. A. Hays, Pine Bluff.

AFTERNOON SESSION
Hotel Marion
Wednesday, April 6—1:30 P. M.

"Clinical Features of Pelvic Endometriosis"—H. S. Crossen, St. Louis, Mo.

"Diagnosis of Obscure Conditions of the Right Upper Quadrant"—A. E. Hertzler, Kansas City, Kan.

"Evaluation of the Surgical Treatments of Peptic Ulcer"—S. J. Wolfermann, Fort Smith.

"The Surgical Abdomen from the Diagnostic Standpoint"—J. S. Wilson, Monticello.

"Treatment of Cranio-Cerebral Injuries"—A. F. Hoge, Fort Smith.

"The Conservative Treatment of Peritonitis"—R. B. Robins, Camden.

"Spinal Anesthesia"—C. B. Capel, Pine Bluff.

"Importance of Early Diagnosis in Ectopic Pregnancy"—H. H. McAdams, Jonesboro.

ALUMNAE DINNER
Hotel Marion
Wednesday, April 6—7:30 P. M.

Special Entertainment.

SCIENTIFIC SESSION

Hotel Marion
Thursday, April 7, 8:30 A. M.

"Diabetic Gangrene"—W. H. Olmsted, St. Louis, Missouri.

"Carcinoma of the Skin, Lip and Inside of the Mouth"—J. M. Martin, Dallas, Texas.

"Convulsive Seizures—Their Treatment"—Grayson E. Tarkington, Hot Springs

"The General Practitioner and the Family Physician"—B. L. Ware, Greenwood.

"Resume of the Gall-Bladder Cases of Sparks Memorial and St. Edward's Mercy Hospital Since 1925"—I. F. Jones, Fort Smith.

"Hydrotherapy in the Treatment of Arthritis"—M. F. Lautman, Hot Springs.

"Empyema"—Louis M. Smith, Russellville.

FINAL MEETING OF THE HOUSE OF DELEGATES

Hotel Marion

Thursday, April 7, 1:30 P. M.

Calling Meeting to Order—D. A. Rhinehart, President.
Roll Call.
Report of the Nominating Committee.
Election of Officers:
President-Elect.
First Vice-President.
Second Vice-President.
Third Vice-President.
Secretary.
Treasurer.
Five Councilors.
Delegate to the A. M. A.
Report of Committees.
Further New Business.
Adjournment.

FINAL GENERAL MEETING

(Thursday Afternoon, April 7, immediately after adjournment of the House of Delegates)

Calling Meeting to Order—D. A. Rhinehart, President.
Unfinished Business.
Report of the Reference Committee.
Presentation of President Will H. Mock.
Presentation of the President-Elect.
New Business.
Selection of Place for Next Meeting.
Adjournment sine die.

WOMAN'S AUXILIARY
TO THE
ARKANSAS MEDICAL SOCIETY
EIGHTH ANNUAL MEETING

April 5, 6, 7, 1932

Headquarters: Hotel Marion, Little Rock.

OFFICERS

President—Mrs. Wm. R. Brooksher, Jr., Fort Smith.
President-Elect—Mrs. P. H. Phillips, Ashdown.
Vice-President—Mrs. B. A. Rhinehart, Little Rock.
Secretary—Mrs. Pierre Redman, Fort Smith.
Publicity Secretary—Mrs. Marcus T. Smith, Conway.
Treasurer—Mrs. Gaston A. Hebert, Hot Springs.
Parliamentarian—Mrs. Wm. Hibbitts, Texarkana.
Historian—Mrs. C. W. Garrison, Little Rock.

DIRECTORS

Mrs. J. B. Crawford, Little Rock
Mrs. M. V. Russell, El Dorado
Mrs. C. T. Drennen, Hot Springs
Mrs. E. E. Barlow, Dermott.

MRS. WM. R. BROOKSHER, JR.
Fort Smith
President, Woman's Auxiliary, Arkansas Medical Society, 1931-1932

PAST PRESIDENTS

Mrs. C. W. Garrison, Little Rock
Mrs. Dewell Gann, Sr., Benton
Mrs. C. T. Drennen, Hot Springs
Mrs. T. G. Porter, Hazen
Mrs. Charles G. Hinkle, Batesville
Mrs. Chas. E. Oates, Little Rock

ADVISORY COMMITTEE

ARKANSAS MEDICAL SOCIETY

Dr. D. W. Goldstein, Fort Smith; Dr. Pat Murphey, Little Rock; Dr. Frank Kirby, Harrison; Dr. H. E. Murry, Texarkana; Dr. H. D. Stroud, Jonesboro.

STANDING COMMITTEES

ORGANIZATION

Mrs. B. A. Rhinehart, Little Rock; Mrs. L. H. Lanier, Texarkana; Mrs. T. S. Hare, Crawfordsville; Mrs. A. F. Hoge, Fort Smith; Mrs. C. W. Jones, Benton; Mrs. H. J. G. Koobs, Rogers; Mrs. Homer Dickens, DeWitt.

EDUCATION AND PUBLIC HEALTH

Mrs. Harry E. Murry, Texarkana; Mrs. G. E. Tarkington; Mrs. Walter Eberle, Fort Smith; Mrs. Anderson Watkins, Little Rock; Mrs. A. Isom, Dumas.

ILSE F. OATES LOAN FUND

Mrs. C. T. Drennen, Hot Springs; Mrs. S. A. Drennen, Stuttgart; Mrs. T. G. Porter, Hazen; Mrs. Chas. E. Oates, Little Rock; Mrs. G. R. Siegel, Clarksville.

HYGEIA

Mrs. D. W. Goldstein, Fort Smith; Mrs. J. C. Cunningham, Little Rock; Mrs. E. L. Thompson, Hot Springs; Mrs. O. J. T. Johnston, Batesville; Mrs. G. D. Murphy, El Dorado; Mrs. S. A. Collom, Jr., Texarkana; Mrs. C. E. Park, DeWitt.

CONSTITUTION AND BY-LAWS

Mrs. H. K. Carrington, Magnolia; Mrs. Hoyt R. Allen, Little Rock; Mrs. T. E. Buffington, Benton; Mrs. J. R. Lynn, Hazen; Mrs. R. H. Whitehead, DeWitt.

PROGRAM

Mrs. Chas. E. Oates, Little Rock; Mrs. D. A. Rhinehart, Little Rock; Mrs. Hugh Brooks, Conway; Mrs. F. O. Mahony, El Dorado; Mrs. George Fletcher, Hot Springs.

PUBLIC RELATIONS

Mrs. H. H. Smith, Fort Smith; Mrs. R. R. Kirkpatrick, Texarkana; Mrs. J. S. Steele, Hot Springs.

MEMORIAL

Mrs. Charles G. Hinkle, Batesville; Mrs. C. T. McWilliams, Magnolia; Mrs. I. N. McCollum, Conway.

FINANCE

Mrs. Earle T. Hunt, Clarksville; Mrs. Gaston A. Hebert, Hot Springs; Mrs. E. L. Beck, Texarkana.

LOCAL COMMITTEES FOR THE MEETING

ENTERTAINMENT

Mrs. M. J. Kilbury, Mrs. R. C. Kory, Mrs. R. M. Eubanks, Mrs. A. C. Shipp, Mrs. W. L. Sadler, Mrs. Paul Mahoney, Mrs. H. Fay H. Jones, Mrs. Walter Carruthers, Mrs. Homer Scott.

PUBLICITY

Mrs. R. M. Blakely.

AUTOMOBILE

Mrs. R. E. Pryor, Mrs. E. H. White, Mrs. L. V. Parmley.

FLOWERS

Mrs. B. A. Rhinehart, Mrs. R. M. Eubanks, Mrs. J. B. Crawford, Mrs. H. A. Higgins, Mrs. K. W. Cosgrove, Mrs. C. W. Garrison.

MUSIC

Mrs. S. R. Crawford, Mrs. M. H. Yeaman.

COURTESY

Mrs. C. W. Garrison, Mrs. Wm. R. Bathurst, Mrs. Pat Murphey.

REGISTRATION AND CREDENTIALS

Mrs. Anderson Watkins, Mrs. B. A. Bennett, Mrs. Hoyt R. Allen, Mrs. S. C. Fulmer, Mrs. W. A. Snodgrass, Sr., Mrs. E. H. Wilkes, Mrs. M. B. Holmes, Mrs. Randolph Smith, and Mrs. Chas. E. Oates.

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Program

TUESDAY, APRIL 5

Hotel Marion

8:30 A. M. Registration.

10:00 A. M. Executive Board Meeting, Room 219.

1:15 P. M. Joint Session with the Arkansas Medical Society.

4:00 to 6:00 P. M. Tea at home of Mrs. A. L. Alexander, Scott, Ark.

8:30 P. M.

Entertainment and President's Reception

Hotel Marion Ball Room

WEDNESDAY, APRIL 6

8:30 A. M. Memorial Service—Hotel Marion. (Joint session with the Arkansas Medical Society.)

9:30 A. M. General Session of Woman's Auxiliary—Herman Kahn Room, Hotel Marion.

Meeting called to order by the President, Mrs. Wm. R. Brooksher, Jr., Fort Smith.

Reading of Minutes.

Roll Call.

Address by President, Arkansas Medical Society, Dr. D. A. Rhinehart, Little Rock.

Reports:

Report of Woman's Auxiliary to American Medical Association—Mrs. Chas. E. Oates, Little Rock.

Report of Woman's Auxiliary to Southern Medical Association—Mrs. S. A. Collom, Sr., Texarkana.

Announcement of Committees.

Report of Credentials Committee.

State Officers.

State Committees.

County Auxiliaries.

Special Committee—Jane Todd Crawford Memorial, Mrs. H. H. Smith, Fort Smith.

Report of Nominating Committee—Mrs. Marcus T. Smith, Conway, Chairman.

Election of Officers.

1:00 P. M. Luncheon—Little Rock Country Club.

Toastmistress—Mrs. D. A. Rhinehart.

Address by A. M. A. Auxiliary President, Mrs. A. B. McGlothlan, St. Joseph, Mo.

Introduction of County Presidents and Visitors.

Music.

Introduction of Past State Presidents, Wives of the President and of the Secretary of the Medical Society, and of the Convention Chairmen.

Introduction of State Officers, 1931-32.

Music.

President's Address—Mrs. Wm. R. Brooksher, Jr.

Installation of Officers.

Reading of Minutes.

3:30 P. M. Executive Board Meeting, Mrs. P. H. Phillips, Ashdown, presiding.

ALBERT PIKE HOTEL

7:30 P. M.

Dutch Treat Supper. Guests will be given complimentary tickets to Arkansas Theater.

THURSDAY, APRIL 7

9:30 A. M. Round Table Discussion of County Auxiliary Problems, Kahn Room, Hotel Marion.

THE JOURNAL
of the ARKANSAS MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

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Original Articles

TULAREMIA: INITIAL LESION ON THE SCROTUM

M. J. KILBURY, M. D., Little Rock, and
JAMES M. KOLB, M. D., Clarksville

This case, L. M. H., entered the Missouri Pacific Hospital at Little Rock, Arkansas on May 10, 1931. He remained in the hospital until May 14, 1931, and has been under the observation of his family physician since that time.

On entering the hospital the patient stated that about two weeks previous he noticed a lesion appearing on the right side of scrotum; and a few days later the right inguinal lymph glands began to swell. They were firm at first, but had begun to soften. He had been having an afternoon rise of temperature to 102 degrees, which remained up for four to six hours, but subsided before morning. He denied the possibility of a luetic infection, but stated that two weeks prior to the appearance of the lesion he was out in the woods hunting. He also stated that his work brought him in contact with cars loaded with cattle and cars in which cattle had been shipped.

Physical examination of the patient revealed no pathological lesions except as follows: There was an ulcer about 0.25 inch in diameter on the right of scrotum, which had a peculiar livid purple area of induration around the base; this area was necrotic. The right inguinal lymph glands were swollen, tender, and semi-fluxulent with an increased local temperature. A working diagnosis of tularemia was made, to be differentiated from the primary lesion of syphilis, with secondary infection.

The laboratory reports were as follows: Dark field examination of scrapings from the lesion failed to reveal the presence of spirochaeta pallida. Serological examinations revealed a negative Kolmer, Kahn and Kline tests. Blood counts after the method of Schilling were as follows:

Date	Leucocytes	Bas.	Eos.	Myl.	Juv.	Staffs	Seg.	Lym.	Mon.
				Left shift: 9					
May 12	7,200	1	8	1	1	7	51	27	6
				Left shift: 5					
May 13	9,000		9			5	55	26	5
				Left shift:					
	7,500		4				50	45	1

The interesting features of the above counts are the definite increase in eosinophiles, also a low leucocyte count with only a moderate left shift. The examination of the urine was essentially negative. The agglutination test using B. Tularense as antigen, was definitely positive; there was complete agglutination in dilutions up to and including 1 to 160.

A final diagnosis of tularemia was made. The patient was instructed as to the probable course of the disease and its treatment. Although being advised to remain in the hospital, he was discharged at his own request on May 14, 1931.

After leaving the hospital, the patient's family doctor, Dr. D. C. McBride, made weekly reports on his condition. He did not have any elevation of temperature after leaving the hospital. On May 27, 1931, the glands were incised and a large amount of purulent discharge evacuated. The glands have healed and the patient made an uneventful recovery.

This case is interesting for two reasons: First, the unusual location of the primary lesion; second, the similarity of the primary

lesion to that of syphilis. After a rather thorough review of the literature, we have been unable to find a record of a case of tularemia with the initial ulcer on the scrotum. As to the origin of this lesion we have no definite information. It is quite possible that the patient was bitten by an insect either while hunting or while engaged in his work around cattle cars.

The ulcer could have been mistaken for a chancre. Its gross appearance was quite similar as will be noted in the accompanying cut; although the livid purple hue which this lesion presented is not seen in the luetic lesion.

THE RELATION OF THE PHYSICIAN TO THE PUBLIC; TO EACH OTHER AND TO THE PATIENT*

E. E. Barlow, M. D., Dermott

In the recent years interest in the betterment of social conditions has been growing rapidly, and as a result of this movement, the part played by sickness and disease in determining the welfare and efficiency of a community has been recognized.

Much of the credit for the awakening of this spirit of inquiry and desire for enlightenment on the vital questions affecting the health and happiness of the people, is due to the social worker. In the past it has been the case that the physician, engrossed with the vexations and cares of his arduous profession, encountering disease in detail, spending his energies in personal attention to his patients, has centered his interests in them and neglected the community at large. If to this preoccupation there be added an air of dignity and aloofness in the consideration of the public health and a disposition to throw all the responsibility for the amelioration of general conditions upon health organizations, without an energetic co-operation with them, then indeed is the matter of progress to be a slow one. The public is eager for information along lines of preventive medicine, and it is our duty to see that it is of the right kind. If health departments are to have their work go smoothly the people must understand the reasons for their various activities and be in sympathy with it.

It should be taught to have an appreciation of the function, the aims and the possibilities of medicine, and no one except the physician is in a position to supply such information correctly.

The bulletins and circulars issued by State and municipal departments of health are of much value, but their fullest measure of success can only be attained by the physician acting as the "follow-up man," and emphasizing their truths and explaining to the doubting the points concerning which they are not yet convinced.

While all agree that the physician is the High Priest of service to the sick and afflicted, yet first of all he should be the Messenger of health, warning the people of the dangers by which they are continually surrounded and battling if need be for measures to correct them.

For many years I have been firmly convinced that pertussis is a disease which is held too lightly by far too many physicians and given over to domestic remedies, or in the hands of a careless mother and grandmother. That this is true is attested by the fact, that our Bureau of Vital Statistics records many deaths per year from this disease. If to this be added the very considerable number of tuberculous, who become such by reason of weakened vitality, and chronic irritability of the respiratory passages as a heritage from their whooping cough, we can readily see what a mortality accompanies it.

One case of scarlet fever or diphtheria can throw a community into a panic. Yet children with whooping cough are permitted to go where they please, when they please, and as long as they are able to walk. Now and then a nervous mother will raise a protest against this utter disregard of the health

*Read before the meeting of the Fourth District Medical Society held at Monticello, March 1, 1932.

of the children of her community, but to little avail.

An awakened public conscience to the dangers and seriousness of the disease is needed. We should be instant in season as well as out of season to point them out and emphasize them in such a manner that those who are negligent and careless of the rights of others shall suffer an ostracism which will bring them to a realizing sense of their deficiency.

I might enlarge upon this theme by parading the entire list of the commoner contagious diseases, but these two alone should cause us to take a mental retrospect, and if afterwards we stand self accused, of having failed in our public duty, let us take a firmer grip upon the future, stirred by a sense of personal responsibility, and driven by the desire to achieve the greatest good for the greatest number.

To deny that the relations of physicians to each other are not always as amicable and pleasant as they should be, would be such a serious misstatement, that it would immediately bring a challenge as to its correctness from every one here. It is a deplorable fact as patent to the laity as to ourselves; but the condition is certainly improving and growing better. To remedy the friction and correct the errors upon which so much of it depends, has been one of the chief aims of organized medicine, and in furtherance of this purpose the American Medical Association has adopted certain rules of conduct entitled "Principles of Medical Ethics." Ethics briefly defined is "The Science of Human Duty;" the science of right character and conduct." It is as futile in medicine as it is in the State to attempt to force a man to practice the golden rule by legislation, and we must content ourselves with admonitions against its infraction, and illustration of its specific application to various phases of our professional life.

The attitude we assume towards our professional brethren is partly a matter of training, partly a matter of temperament. If we have failed to grasp the higher conception of our profession, the relief of suffering and disease, and the general uplift of humanity, and look chiefly on the material side, seeking for the greater financial gain, we have subordinated the finer and nobler qualities of our nature. So it is that when greed, or envy, that pain of the soul as Plato calls it, dominate our thoughts, our actions controlled by one or all of them, we become inconsiderate of the rights or feelings of our brethren.

It may be that temperamental conditions, when incited by the ingratitude of our fellows, or the idle chatter of a neighborhood, causes the old Adam in us to arise and leads us into forbidden ways. If we would only remember that all of us live in glass houses, a type of structure peculiarly vulnerable to attack, we would not be so prone to criticize or disparage the work of others. I commend to your earnest attention the beautiful sentiments of the greatest teacher of our age, the incomparable Dr. Osler, on charity, embodied in his farewell address to the medical profession of the United States, entitled, "Unity, Peace and Concord."

I believe the violations of the code frequently arise from ignorance of its requirements, rather than intentionally, I think it should be read at every annual meeting of the county societies in order that each member may be grounded in its teachings.

The relations of the physicians to his patient are varied and necessarily influenced by the character of the malady he may be called upon to treat, as well as by the temperamental conditions with which he is confronted.

It would seem at times that like St. Paul, he must be all things to men. His manner should be courteous, marked by dignity rather than familiarity, sympathetic, yet firm, if need be, tactful but not designing, cheerful and pleasant. An almost inexhaustible stock of patience is of the utmost importance, to which must be joined a delicacy of feeling and honesty of purpose, would he win the respect and confidence of his patients and commend the attention of those who do not avail themselves of his services.

Of few words, he should take into the sick room the attributes of a gentleman, but equally, or more important, a scientific training and skill, the extent of which marks his preparedness for service in his most important relations to the patient, viz: diagnosis.

Dr. Osler says, "In the fight which we have to wage incessantly against ignorance and quackery among the masses, and follies of all sorts among the classes, diagnosis, not drugging, is our chief weapon of offense."

If the mission of the physician were merely to treat disease the burden of his work would

be immeasurably lightened. It is a comparatively easy matter if one is sure of his diagnosis to institute a line of treatment which will either cure the condition, or ameliorate the most prominent and distressing symptoms. By reference to text books and current medical literature, he can vary the treatment from time to time if he has exhausted his personal knowledge, so that the patient will have the benefit of the experience and teachings of the best trained minds in the profession. But correct diagnosis must precede treatment if success is to crown our efforts and "there is the rub."

Medical science might almost be said to be an achievement of the last century. Before that time there was much teaching, an equal quantity of mysticism and empiricism, more of guess work, and but little real knowledge. The introduction of the microscope into the field of medicine laid bare many of the secrets of bacteriology and paved the way for the use of antitoxins and vaccines and of hematology with its attendant serum therapy.

The discovery and perfection of general anesthesia has made it possible to determine through exploratory operations what could only have been guessed at otherwise. So too the perfection and development of the X-ray has laid bare the inner recesses of the human body in a truly miraculous way.

The great discoveries are not all made by the professors in our colleges. Henner worked out his discoveries in a village; McDowell, Long and Sims were country doctors; Koch was a district physician. The man who works is rewarded if not by discoveries, at least by a sense of satisfaction of work well done, which after all is the greatest reward the world can offer.

We need never fear to impress a patient with our ignorance if we confess to him we don't know what is the matter, but that we need to further observe and study the case. The doctor who loses ground is the one who really doesn't know, and won't say so, and does not care to find out, but simply drifts along, temporizing and trusting to the "*viz medicatrix naturae.*" He is aptly described in the Arabian proverb:

"He who knows not and knows that he knows not is simple, teach him."

Many patients are pleased at the prospect of having something unusual or interesting the matter with them and they will all be better satisfied when we have neglected none of the modern helps to diagnosis in arriving at an opinion.

The snap diagnosis pleases him who makes it more than it does anyone else. It sometimes takes days before one can be fairly certain of a diagnosis, but during this time the student who recognizes that "its final object is to be able to treat disease intelligently, and the application of scientific methods to the full discrimination and recognition of disease constitutes the art of diagnosis" has not retrograded in professional ability.

The diagnosis of a case depends on (1) history, family and personal; (2) physical finds; (3) laboratory findings; (4) observation, and (5) reason.

Sometimes when pressed for time and confronted with some prominent symptoms we rely upon them too much and neglect to secure sufficient history.

I believe that a painstaking physical examination is more neglected than anything else in making a diagnosis. We should know the condition of the heart and kidneys in every case we treat. So, too, if the laboratory reports tuberculosis in the sputum should we know how extensively the lungs are involved in order to be able to tell the patient what is his chance for recovery. It may impress the patient to listen to the heart with the ear to the chest through the clothing, but we know it practically tells us nothing, except that the heart and lungs are at work.

"We make mistakes; other people commit sins." A wrong diagnosis after due examination (a thing that happens to all of us) is a mistake and a pardonable one; a wrong diagnosis arrived at without due examination (a thing that happens to the other fellow) is a sin; medically speaking it is "the unpardonable sin." That an examination was not allowed is no excuse for a wrong diagnosis. If you can't convince the patient that an examination is necessary, quit the case for it is better to lose the patient than to lose reputation. Moreover, do not treat first and examine afterwards; for then you may be called upon to treat not only the disease, but the effect of your own treatment. After an examination has been made, if still in doubt, admit it. If you do not know enough about the case to satisfy yourself, it is not safe to assume that you know enough about

it to satisfy the patient. This is not only indifferent ethics, but also bad policy."

Which is the worst error to fail to observe certain conditions or to observe them and interpret them incorrectly? In the writer's opinion, the first is much the worst error. Observation is a matter of patience, training and thoroughness, in all of which a man may improve himself but the use which he makes of his observation is partly a matter of his mental equipment. True he can train his power of thought and judgment to some extent, but we vary greatly in the quality of our cerebral cells, and the saying of the father of medicine, "experience is fallacious and judgment difficult" is always true. To observe correctly and decide wrongly is sure to happen to the best of us, but to observe carelessly happens only when we permit it."

Reason, after all, is a most powerful aid to diagnosis. To weigh the worth of each sign and symptom and to formulate a clear idea of the disease process, which is going on even though we do not name it. Arnold Bennett in his "How to Live on Twenty-Four Hours a Day," says "I am entirely convinced that what is more than anything else lacking in the life of the average well-intentioned man of today, is the reflective mood."

It is an easy thing to grow lop-sided in our mental processes and herein lies our danger in making diagnosis. One man grows strong on history and neglects the laboratory or vice versa. They should go hand in hand. The results of the latter must be fitted into the clinical findings. No odds how complicated the clinical picture may be it is of extreme importance to be able to harmonize as many symptoms as possible under the head of one disease. It has been said that "No greater compliment can be paid the diagnostician than his ability to differentiate sharply between a complicating or symptomatic, and a co-existing and independent disorder. When such a confused clinical picture is present one should have the diagnostic ability to carefully separate and analyze the findings and only reluctantly admit the presence of a second ailment after a most painstaking and thorough examination.

The patient is entitled to this at our hands and it is our duty to omit none of the diagnostic aids which are the development of modern medicine in order that we may arrive at the fullest knowledge of the case in hand. If we are not familiar with the technique of their use then the patient should be informed of our limitations and if their means permit, should be referred to those who are. Every one should systematically use the stethoscope and the sphygmomanometer and make chemical examinations of the urine; while work with the microscope X-ray, cystoscope and bronchoscope, and serum tests should be left in the hands of those who by reason of special training are peculiarly fitted to do it. Any other course is alike incompatible with our highest duty to our patient as well as to ourselves.

THE MEDICAL CARE OF THE HANDICAPPED CHILD*

A. C. Shipp, M. D., Little Rock

One hundred forty-three years ago, our present form of government began functioning in America. Among the nations of the earth this was a unique experiment and many prophesied failure. With comparatively few changes in our Constitution to meet changed social needs and demands we have arrived at our present position in the family of nations. In point of wealth, extent of domain, population, education, scientific achievement, living conditions, etc., America is at least in the first rank if not at the head of the file. This enviable position entails upon us grave responsibilities in two directions, viz., toward the outside world and toward the world within our boundaries. How we meet those responsibilities will determine the future of the United States—your country and mine.

In this discussion we shall speak of a few problems concerning responsibilities within our boundaries, upon the solution of which depend the stability of our future.

In education and the application of science to the production of wealth and material necessities and luxuries we stand first, but when we study vital statistics we find ourselves, compared to some other nations, weighed in the balances and found wanting. We have one of the highest maternal death rates of any of the major powers. Our infant death rate is terrific and has been practically

*Read before the White House Conference on Child Health and Protection at Little Rock, March 1, 1932.

unchanged for years. Out of 45,000,000 children 10,000,000 are deficients. These conditions challenge our best thought and demand our unceasing and strenuous efforts toward correction. Almost at once, into the hands of these children we must pass the affairs of government, commerce and education. Upon their ability morally, mentally and physically to cope with the complex problems of tomorrow rests the hopes of our country and civilization. What are we doing to make safer motherhood and meet the needs of the children in America?

President Roosevelt called the first White House Conference for the purpose of discussing the problem of the delinquent child. From this meeting we have the Childrens' Bureau created to study and report on all matters pertaining to the welfare of children.

In 1919, President Wilson called the Second White House Conference. With information concerning the great cause of child welfare gathered by the Children's Bureau, this Conference recommended a nation-wide campaign to reduce maternal and infant mortality and was able to secure Federal aid in a financial way. That much good was accomplished cannot be questioned, however it is very evident that a better method of reaching the people must be worked out, since the results so far have been disappointing and we have, comparatively speaking, had a poor return for our expenditure.

To aid in carrying out the program as outlined by the Childrens' Bureau following the Second White House Conference, The Sheppard-Towner Maternity and Infancy Act was passed by Congress and became a law November 23, 1921.

Without discussing this Act, I shall quote a comment upon results from an Editorial in the Journal of The American Medical Association, January 30, 1932. "The Act, so adroitly framed as almost wholly to preclude the possibility of a review by the United States Supreme Court, authorized the Childrens' Bureau in the Department of Labor to enter into agreement or compacts with such States as were willing to surrender to the Federal Government for monetary considerations their rights to supervise and control maternal and child hygiene. As the people of every State had to contribute their share of the general fund through federal taxation and as they could get none of their money back unless their State Governments submitted to federal domination, the scheme succeeded. That is, it provided for setting up an elaborate federal machine and for keeping it in operation. On June 30, 1929, however, the Act died. Congress had killed it by express repeal."

"During the seven and one-half years that the Sheppard-Towner Act was in effect, it cost the people about eleven million dollars in taxes. During that entire time it did not develop a single new idea in the field of maternal and infant hygiene. As shown by official mortality statistics, it did not accelerate the rate of decline in either the maternal or the infant death rates by even a fraction of a point per annum. Either as an experiment in federal administration of State affairs or as an experiment in maternal and infant hygiene, it was a failure."

In my opinion, this criticism in the main is just, so far as results affecting maternal and infant mortality and child welfare are concerned. Why? Because the money and force of the movement were, for the major part, dispersed in organization and the gathering of statistics, not unimportant in themselves, but certainly not effective in securing the results hoped for. The whole situation to the present reminds one of the old story of the farmer, who, before going to town in the morning, told his hired man to whet up the grass scythe and cut the grass in the lot back of the barn. Upon his return in the evening he found the grass uncut and the hired man sitting on the shady side of the barn whetting the scythe. Thoroughly exasperated he asked "What the devil you been doing all day instead of cutting the grass ordered this morning?" "Wall" drolled the hired man, "I been whettin this scythe as I calculate no time is ever lost in whettin." We have lost some time in "whettin" under the Sheppard-Towner Bill, but, with our scythe good and sharp now, it is high time to get something done.

In view of apparent slow progress in obtaining desired results, President Hoover in 1929 called the Third White House Conference "to study the present status of the health and well-being of the children of the United States and its possessions; to report what is being done; and to recommend what ought to be done and how to do it."

With the work that has been done we are now ready to take up this last clause, "and recommend what ought to be done and how to do it," with the emphasis on the "how to do it." For purposes of study, discussion and execution of plans, 4 divisions were formed, viz., Medical Service; Public Health and Adminstration; Education and Training; The Handicapped Child. In dealing with the medically handicapped child, these same four divisions must be co-operative, in their application, distinctly separate, yet closely coordinated, not over-lapping nor one assuming the prerogatives of the other, assisting but not retarding each other.

In the organizations represented here today, we have the means at hand for finding each medically handicapped child in the State, and we must work out some way of providing for the child adequate relief from his handicaps, safely and economically. For the medically handicapped child, the first relief station should be the medical service represented by the physicians of the community. Each child should be completely examined for deformities at birth and the parents instructed what to do relative to same, and, at this time, the importance of a complete annual health examination for the child should be urged by the family physician and always a copy of same together with recommendations for medical care given to the parents. It should be the duty and the care of the family physician to follow up his recommendations in the case of the medically handicapped child and call to his aid every agency available to the end of attaining relief for the condition. Among those who may be of service below the school age are the public health officials, public health nurse, the pastor or priest, and any one or maybe all of the social organizations represented here today.

If the above suggestions are followed religiously, very few children will reach the age for pre-school health examination with medical handicaps amenable to correction which are not being cared for.

The children entering public and parochial schools should have the pre-school examination. This examination should be done preferably by the family physician and report made on a uniform standard individual record which shall be accepted by the school authorities. Children not able to secure the above service should be the wards of the community and State and this service procured for them by the social service organizations operative in their respective communities not in the present manner, but in a more scientific and humane way. Instead of being herded together at the school house, courthouse, or some other public place, they should be taken individually to an office or clinic created and arranged for the purpose of examining human beings in a scientific manner.

From this age period, a strong ally to the physician enters the child's life, viz., the school, the school nurse, and the P.-T.-A. All children who have not properly filled physical records six months before entering school should be located and required to secure same from their family physicians. Families not financially able to afford this service should have same provided for them, but under no circumstances should this be delayed until the opening of the school nor should a day be set aside and these children herded together and hurried through a more or less public examination, making an exhibition of their poverty. Permit me to say at this time for the physicians of the Arkansas Medical Society that they stand ready to take care of the worthy poor and afflicted in these examinations, but that they should be brought to their offices by appointment and singly, not in crowds, so that each may receive individual attention. These examinations should be conducted over a period of time sufficient to prevent crowding or hurry. Justice constrains me to state at this time that the medically handicapped, underprivileged child is no more the ward of the doctor of the community, or the medical profession in general, than of the merchant, banker, farmer, or any other citizen, and he should not be called upon to bear any more or any less than his pro-rata community share of the expense of caring for same. Since these children are the wards of the community, funds should be provided by the community and pro-rated for examinations of the indigent among the physicians resident in the district or community.

Children requiring medical or surgical attention should be treated with the same humane consideration as outlined above. The public school clinic, where adequate scientific and modern medical equipment is not available and proper diagnostic and operative technique possible, is unfair to the pupil and should not be asked from the doctor.

In this connection I wish to discuss the public tonsil operative clinic as it has been conducted in this and other States. The children of a community, usually rural, have their tonsils examined by school teacher, nurse, or possibly a physician. It is recommended that large tonsils, cryptic tonsils, red tonsils, pale tonsils, and any type of tonsils not normal at the time of examination, be removed, and, for fear some tonsils may be slighted, any that fear that they may become infected are invited to be present at a certain day and be removed. Upon the date set aside, the children gather at some public place where the operative rooms have been prepared with facilities at hand. The surgeon, a specialist and in all cases, so far as I know, a skillful, well prepared, ethical man, who is doing this work for the community, not because he thinks it is the best way or even a good way, but because he has been importuned by organizations and associations until he is made to feel that, as a citizen and doctor, it is up to him to do this as his part to the common good. The children are operated anywhere from fifty to a hundred. There is no equipment or time for blood coagulation time tests as precaution against hemorrhage—no time or equipment adequate for heart or lung examinations. The specialist goes home at the end of the day. The children go to their respective homes scattered over the community, or remain in charge of a nurse. Think of the situation if one of these were your child and it should start a hemorrhage that night. You call the local physician and find that he has just gone on an emergency call ten miles the other side of town. You see the point? Unfair to the child—unfair to the specialist—no chance to follow up his work and see that results are what they should be—just cut and run away and trust to the God of Chance for results.

Of course, all chronically infected tonsils should be removed, but the child is entitled to have ascertained by competent and sufficient axamination that the tonsil is one that demands removal, that he is in safe physical condition for its removal, and that he will have adequate attention after the removal. I have in mind now a twelve year old girl with a tuberculous infection, doing well and making satisfactory recovery. She had "bad tonsils" she was told. She had an opportunity to have them removed. She was given an ether anesthetic and had the tonsils removed. The next day her temperature was 103 degrees and an acute exacerbation of the tuberculosis killed her in five weeks. The man who removed her tonsils and the man who gave her ether did not know that she was tuberculous.

Another common handicap of the child which may be removed if taken in time is convergent strabismus or cross-eye. Quoting from a recent paper by Dr. K. W. Cosgrove: "Figures from eight counties of Arkansas show that in forty thousand four hundred seventeen children 440 were cross-eyed." This is one per cent and only 20 per cent of this number were attempting to do anything about their trouble. For the prevention of defective vision these children should be taken to a competent oculist as soon as the trouble is discovered, as the time for effective corrective work to save normal vision is before six years of age.

The army of unfortunate crippled children in the State is being located, and, as far as possible with means at hand, is being cared for through the splendid work of the Arkansas Society for Crippled Children and the various hospitals, physicians and surgeons of the State.

In this branch of service we need better co-operation between finding agencies and physicians in order to determine those cases that can be studied and treated in the State to advantage and to decide upon those that can be better cared for elsewhere. The Shrine Hospitals for Crippled Children at Shreveport and Kansas City have rendered splendid service in caring for Arkansas crippled children and always give a cheerful and willing response to our need, and, since Arkansas Shrine organizations contribute to the support of both these institutions, we feel that we have a real interest in them and are not begging when we ask admission for those we cannot care for ourselves, but to go farther than this would be an imposition and would deprive many from other States who cannot help themselves of room in these hospitals. Common fairness demands that we take care of every case possible in our own borders and we are glad that our own hospitals are now most of them equipped and ready to give efficient service of first quality and no longer do we need to send our own citizens away from their State to secure adequate medical

service in either diagnostic or therapeutic departments of medicine.

Probably the most noteworthy progress in medical practice and social service has been in the field of childhood tuberculosis, its discovery and management. In this field an ounce of prevention is truly worth a pound of cure. The recognition of the value of the biological test and the present wide-spread knowledge of the technique of making it has placed at our disposal the means of finding every case of childhood tuberculosis, the same principles with proper technique and interpretation are just as certain and valuable in diagnosing incipient tuberculosis of other forms which interpreted means that practically all such cases are curable. But yesterday biological methods of diagnosing and treating tuberculosis were mercilessly criticised by many—today they are used by every student in the field of tuberculosis. It is an accepted dictim that in this disease "without sensitization there is no immunization" and artificial sensitization is a proven and accepted fact. These discoveries when as universally and persistently applied as is vaccination against small-pox will make tuberculosis as scarce as small-pox. As evidence read the history of tuberculosis in the Hela Peninsula.

To enumerate all the medical handicaps of childhood and discuss them would draw this paper on interminably, so we shall content ourselves with the above problems.

With these and many other questions affecting the handicapped child we are dealing in a way through one or more of the organizations here, but there lacks co-ordination of thought, effort and resources that results in a deplorable lack of efficiency. It seems to me that one way of treating this evil, particularly as it pertains to the medically handicapped, would be to have a central committee to act as a co-ordinating agency in advising and directing these cases into proper channels for relief. This committee could well be composed of lay and medical representatives from the organizations meeting in this Conference. Similar committees should be formed for regional groups of counties or communities in order to deal with all cases that may be cared for locally and no case be taken to the central committee except through some district committee. Some such arrangement as mentioned will prevent the need of a new organization and certainly we have more than enough now.

Book Reviews

Diabetes—Its Treatment By Insulin and Diet. A Handbook for the Patient. By Orlando H. Petty, A. M., M. D., F. A. C. P., Professor of Diseases of Metabolism, Graduate School of Medicine, University of Pennsylvania. With Illustrations and Tables. Fifth Revised and Enlarged Edition. Published by F. A. Davis Company, Philadelphia. Price, $2.00 net.

The purpose of this book is only an aid to the physician by giving him a working knowledge of a chronic disease that can be controlled to such a degree that comfort and efficiency will not be disturbed.

Quoting from Dr. John B. Deaver's foreword that the author aptly remarks that the discovery of insulin has proved the unity of diabetes and emphasizes the necessity of a dietary regimen. He says, "Little, however, can be done without the ready cooperation of the internist and the surgeon. Cooperation between the two is desirable at all times, but at no time more so than in the management of the diabetic. The surgeon, to a great extent, must rely on the judgment and experience of the internist, who has made the study of diabetes and its control his own. That is what the author of this little volume has done."

Cancer—Its Origin, Its Development and Its Self-Perpetuation. The Therapy of Operable and Inoperable Cancer in the Light of a Systemic Conception of Malignancy. A Research. By Willy Meyer, M. D., Consulting Surgeon to the Lenox Hill and Post-graduate Hospital; Emeritus Professor of Surgery, New York Post-graduate Medical School. Published by Paul B. Hoeber, Inc., New York. Price, $7.50.

This book deals with the tumor cancer as an ordinary, lawful reaction of the tissue to certain systemic and local morbid conditions of the human organism.

The author recognizes only one ailment, chronic irritation, as the potential source of all of them. The first part describes the origin, the development and self-perpetuation of cancer, and in the second part, refers to the therapy of cancer. The treatment of operable and inoperable cancer in the light of a systemic conception of malignancy.

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All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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THE CHIEF FUNCTIONS OF THE AUXILIARY

SOCIAL, to promote good fellowship, aid in entertainments at medical meetings, and increase attendance at such meetings.

PHILANTHROPIC, to give community service wherever such service is needed, particularly service related to the work of the medical profession.

LEGISLATIVE, education in medical and health laws and participation in such legislation as is requested or approved by the Medical Society to which we are auxiliary.

EDUCATIONAL, to aid the medical profession in its Health Education work through organizations to which we belong.

(a) by becoming informed ourselves.

(b) by accepting positions of leadership in such organizations, particularly on health committees, so that authentic literature may be chosen for programs and for distribution, and that informed speakers may be selected.

(c) by promoting the distribution of Hygeia, the health magazine published by the American Medical Association.

—Mrs. Arthur McGlothlan, St. Joseph, Mo., President, Woman's Auxiliary to the American Medical Association.

Editorial

OUR 1932 MEETING

Dr. Will H. Mock of Prairie Grove our president-elect will succeed Dr. D. A. Rhinehart who presided at the Little Rock meeting, April 5, 6 and 7. Officers elected for the ensuing year were as follows: President-elect, L. J. Kosminsky, Texarkana; First Vice-President, S. B. Hinkle, Little Rock; Second Vice-President, Grace Tankersley, Pine Bluff; Third Vice-President, Chas. S. Holt, Fort Smith; Treasurer, R. J. Calcote, Little Rock; Secretary, Wm. R. Bathurst, Little Rock.

Hot Springs was chosen for the next annual meeting.

There was a good attendance. Three hundred and ninety-six members, 110 visitors, and about 200 Auxiliary members. The total reached upwards of 700.

Dr. D. A. Rhinehart, president, called the House of Delegates to order on the first day, promptly at 10:00 o'clock, and following the roll call and appointment of committees he delivered his address which will be published in the July Journal. Of outstanding interest are his recommendations for the revision of the Constitution and By-Laws including re-districting of the counties comprising the councilor districts. Continuing the program of the House of Delegates, reports were made by the various committees.

Our legal advisor, Mr. Deisch, reviewed the Gantt law, which did so much for the public in preventing direct solicitation by means of agents employed by certain clinics and corporations to prohibit things that are hurtful to the comfort and welfare of society, and that under the exercise of this power, the State may regulate the practice of medicine and surgery.

He also called attention to attempts that have been made in various parts of the State to evade this law by the organization of corporations to attend and treat its patients in hospitals provided by the corporation.

The report in full will be published later with the transactions of the meeting. In addition, the Reference Committee stated that this report is both wholesome and instructive and heartily endorsed. And the council in its report moved that the Pulaski County Medical Society be given the moral and financial support and encouragements to proceed

in the matter of a certain Little Rock hospital.

On the report of the Publicity Committee, the Reference Committee recommended that radio and press privileges as set out in said report be under the direct supervision of each County Society, and that individual names of doctors making the broadcast, or articles written for the press, be withheld from the public but signed by County Society or committee of said society. It was their opinion that Section 3 of this report setting out the tendencies of certain individuals or groups soliciting or contracting for medical or surgical care is specifically covered by Section 5 of Chapter 9 of the By-Laws pertaining to County Societies, and that physicians guilty of such practice are ineligible for membership.

Among the recommendations of the Committee on Legislation, they believe the State Society, the Board of Health and the Medical School, should work together legislatively, to the end that our friends in the General Assembly will not be working at cross-purposes.

State Health Department

Considerable discussion followed the reading of the report on the Committee on Health and Public Instruction. Finally, the following memorandum on clinics and immunizations passed unanimously by the House of Delegates.

It being recognized that immunization through the use of biologicals against smallpox, typhoid fever and diphtheria is the chief means of controlling and eradicating these diseases, and whereas the Arkansas Medical Society has pledged its membership to the protection of the citizens of the State and its support to the State Board of Health.

Therefore, Be It Resolved, that the following cooperative plan of attaining the desired end, namely, the eradication of these diseases, be offered to the State Board of Health for approval:

1. Since conditions vary widely in different sections of the State as to population, accessibility, economic status and adequacy in number of physicians that the plan be modified to meet the needs of each county as determined by the physicians therein and the State Board of Health.

2. That every effort be made by the health personnel under the direction of the State Board of Health to keep the physicians advised as to the health program.

3. That the State Society requests and urges its members to cooperate to the fullest extent in promoting the health program and where possible attend and participate in any clinics or group meetings occurring in their community.

4. That publicity precedes the holding of immunization clinics setting out that they are to be held for the benefit of those who are unable to pay for same and that all be urged to secure immunizations from their family physicians.

5. That the County Society be requested to authorize one or more of its members to be in attendance.

6. That the State Society requests the physicians of each county to fix a nominal immunization fee for those unable to pay the regular professional fee and offer free service to those who are unable to pay, and that biologicals be furnished the physicians through the local health personnel at the State Board of Health contract price for the under-privileged group.

7. That all physicians fill out record cards to be furnished by the State Board of Health and filed with the local health personnel as a matter of permanent record for school use and other purposes.

8. Clinics. That corrective clinics—orthopedic; eye, ear, nose and throat; fact-finding, etc., be held in accordance with the prescribed policy of the State Board of Health as approved by the council.

9. That any infractions of an agreed policy on the part of the local health personnel be submitted to the State Health Officer.

10. That the society pledges its support and urges all of its members to encourage and cooperate in the physical examination of school children and pre-school children and offer all reasonable assistance to the end that those handicapped by corrective defects may be given an opportunity to enjoy their inherent right under the Children's Charter.

Auxiliary

Mrs. W. R. Brooksher, Jr., Fort Smith, presided. The attendance was about 200. Mrs. B. A. Rhinehart of Little Rock was named president-elect. She succeeds Mrs. P. H. Phillips of Ashdown, who will preside at the next annual meeting. Other officers elected are as

follows: Vice-president, Mrs. William Hibbitts, Texarkana; publicity secretary, Mrs. Curtis Jones, Benton; treasurer, Mrs. H. C. Mims, Hot Springs; parliamentarian, Mrs. H. H. Smith, Fort Smith. New members of the board of directors, to be formed jointly with the officers include Mrs. M. C. John, Stuttgart, and Mrs. R. C. Dorr, Batesville.

Mrs. A. B. McGlothlan of St. Joseph, Missouri, president of the Auxiliary of the American Medical Association, was the guest of the society, and the principal speaker at the meeting.

Mrs. P. H. Phillips, newly installed president, announced the following chairman of the committees for the ensuing year: Mrs. H. H. Smith, Fort Smith, constitution and by-laws; Mrs. D. W. Goldstein, Fort Smith, finance; Mrs. Charles G. Hinkle, Batesville, public relations; Mrs. William Hibbits, Texarkana, organization; Mrs. Pat Murphey, Little Rock, education and public health; Mrs. Charles E. Oates, Little Rock, student loan fund; Mrs. W. T. Wootton, Hot Springs, Hygeia; Mrs. C. T. Drennen, Hot Springs, program; Mrs. E. E. Barlow, Dermott, memorial. Mrs. L. H. Lanier of Texarkana was named a member of the executive board.

Abstract

COMPLEX OF ECZEMA: DIAGNOSTIC AND ETIOLOGIC ANALYSIS

John H. Stokes, Philadelphia (Journal A. M. A., April 2, 1932), calls attention to the fact that the Germans, able students of the details of pathologic mechanisms, call eczema that form of dermatitis in which the epidermis exhibits an intrinsic quality of hypersensitiveness to irritants, specific or general. About 5 per cent of all human beings exhibit this intrinsic hypersensitivity. In order to clarify the field of "eczema" he proposes, for the moment, *not* to adopt this definition of eczema but to use a broader one, based on the view that all inflammations of the skin exhibit a complex rather than a simple etiology, analyzable on careful study into what might be called predisposing back-ground, and exciting causes. He defines an eczema, then, as a persistent dermatitis in which the predisposing causes or background outweigh the immediate cause, or causes. The new German concept fits into this scheme as a subhead, for it becomes "eczema allergicum," to coin a phrase, in which epidermal hypersensitivity is the factor that dominates the picture. Thus one may speak of neurogenous eczema, or even neuromycotic eczema, in which an exciting cause such as a yeast infection leads to a dermatitis whose extension and persistence is in part due to the over-shadowing influence of the nervous system on the sweat and vasomotor mechanisms, which supplies the background for the yeast growth. Thus "eczema" becomes again a broad etiologic conception, harmonizing with the very wise tendency of dermatology to return to general medical concepts and relations for the full comprehension of its problems. This seems a wiser use of the term than to apply it to single, local or special phenomena, anatomic or functional. The author proposes to speak not of seborrheic eczema, or mycotic eczema, or even of pure allergic eczema (a term of damnation to the Germans), unless the named designation overwhelmingly dominates the picture. Instead, he speaks of these symptomatic pictures as if they were components in a complex and looks at all eczema for the moment in the light of their interplay. He enumerates ten component factors that make up the etiologic background of "eczema" as commonly understood in American practice thus: (1) the hereditary or familial predisposition factor; (2) the ichthyotic or dry skin factor; (3) the seborrheic habitus or sebaceous dysfunction (oily skin) factor; (4) the pyogenic factor; (5) the mycotic or fungus infection factor; (6) the focal intoxication factor; (7) the metabolic factor with special reference to carbohydrate metabolism; (8) the allergic or hypersensitivity factor, general and specific; (9) the neurogenous factor, and (10) the diathetic state or eczema-asthma-hay fever complex. Distribution tells a surprising amount about an eruption, even before one has clearly identified the elementary lesions or parts of which it is made up. Certain of the foregoing factors have distributions roughly amenable to diagram. By a careful study of the stripped patient, the proportion of these various components taken in connection with the character of the lesions and the landmarks of ichthyosis (which is not a dermatitic state) may be estimated as the basis for diagnosis and treatment. A painstaking study of the patient's history and of

familial and hereditary elements further contributes to diagnosis and prognosis. Of especial importance are the ichthyotic, seborrheic and pyogenic trends and the neurogenous and allergic background.

Personal and News Items

Dr. D. R. Hardeman, Jr., formerly of Little Rock and later of the Mayo Clinic, Rochester, Minn., is now located in Pine Bluff.

Dr. A. H. Hudgins has moved from Griffithville to Searcy.

The Fort Smith Clinical Society, sponsored by the Staffs of St. Edward's Mercy, St. John's and Sparks Memorial Hospitals, met Tuesday, March 22, 1932. President, Dr. S. J. Wolfermann, Director of Clinics, Dr. W. R. Brooksher, Jr.

The thirty-third annual meeting of the American Proctologic Society will meet in Memphis, May 6 and 7, 1932, with headquarters at the Hotel Peabody.

Dr. V. T. Webb of Little Rock was appointed city health officer to succeed Dr. C. R. Moon, who resigned to go to Chicago to take a post-graduate course in the navy hospital there.

Col. James D. Fife, of the United States Army Medical Corps, now on duty in Panama, has been designated commander of the Army and Navy General Hospital at Hot Springs.

The First Counciler District Medical Society will hold its spring meeting at Walnut Ridge, April 21, 1932. Officers are: J. C. Land, Walnut Ridge, president; Robert Haley, Jr., Paragould, vice-president; F. D. Smith, Blytheville, secretary and treasurer.

Dr. G. A. Warren of Black Rock wishes to advise that a man who is traveling over the State, giving his name as "Warren" and purporting to be his nephew in an effort to obtain morphine, is not a relation of his, nor neither is he known to him.

The Tri-County Medical Society, including Union, Ouachita and Columbia Counties, met in Magnolia, Thursday night, April 14. Officers of the Society are: H. K. Carrington, Magnolia, president; R. B. Robins, Camden, secretary.

The scientific program included papers by Dr. T. H. Jones, Magnolia; Dr. Preston Hunt, Texarkana; Dr. H. King Wade, Hot Springs; Dr. T. F. Kittrell, Texarkana, and Dr. Geo. B. Fletcher, Hot Springs. Walter Smith gave the welcome address.

Auxiliary Notes

A Woman's Auxiliary to the Crittenden County Medical Society was organized March 4th, electing the following officers: President, Mrs. T. S. Hare, Crawfordsville; Vice-President, Mrs. J. H. Matthews, Earl; Secretary, Mrs. B. M. Stevenson, Crawfordsville; Treasurer, Mrs. Ray, Earl; Publicity, Mrs. J. T. Irby, Earl.

Mesdames B. A. Rhinehart, Chas. E. Oates and J. B. Crawford motored to Russellville, March 21, and organized a Woman's Auxiliary to the Pope-Yell County Medical Society. Officers are: President, Mrs. R. H. Hood; Vice-President, Mrs. E. J. Haster; Secretary-Treasurer, Mrs. A. W. Rye.

The monthly meeting of the Woman's Auxiliary to the Pulaski County Medical Society was held March 16, at the home of Mrs. N. W. Riegler, with Mrs. C. M. Brooks, Mrs. Randolph T. Smith, Mrs. E. O. Day and Mrs. W. A. Kriesel as assistant hostesses. Presentation of annual reports featured the session, presided over by Mrs. D. A. Rhinehart, president. Mrs. Byron A. Bennett, membership chairman, introduced Mrs. D. T. Hyatt, Mrs. G. D. Reagan and Mrs. Frank O. Rogers as new members, which now gives the auxiliary a total of ninety-four active and two honorary members.

The Johnson County Woman's Auxiliary, met March 3, and elected the following officers: President, Mrs. Geo. L. Hardgraves; Vice-President, Mrs. Earle H. Hunt, Secretary-Treasurer, Mrs. Jas. M. Kolb. Chairman of Hygeia, Mrs. Jas. S. Kolb.

The Woman's Auxiliary to the Garland County Medical Society met with Mrs. Wm. Porter, Hot Springs, March 21. Officers elected were Mrs. C. H. Nims, president; Mrs.

Grayson Tarkington, vice-president; Mrs. M. F. Lautman, secretary; Mrs. C. H. Lutterloh, corresponding secretary and Mrs. Walter Klugh, treasurer. Mrs. Scott Wood, guest, gave an interesting talk on "How to Conduct a Meeting," stressing many parliamentary points.

The Lonoke-Prairie County Medical Society Auxiliary met at the home of Mrs. F. A. Corn, Jr., Thursday, March 17. Officers elected were: President, Mrs. T. G. Porter, Hazen; Vice-President, Mrs. J. B. Wells, Scott; Secretary, Mrs. T. E. Benton, Lonoke; Treasurer, Mrs. E. A. Callahan, Carlisle; Publicity, Mrs. F. E. Utley, Cabot; Chairman Student Loan Fund, Mrs. W. B. Crowgey, Scott; Chairman Education and Public Health, Mrs. F. A. Corn, Jr.

Obituary

McKINNEY, ARDEN THOS.—Dr. A. T. McKinney of Little Rock, died March 17, 1932. Aged 51.

Dr. McKinney was a graduate of the Medical School of the University of Arkansas, being a member of the class of 1908. He began his practice in North Little Rock, but moved to Little Rock about thirteen years ago.

Surviving are his wife, two brothers, Roy E. McKinney of Searcy, and Harry McKinney of St. Louis; two sisters, Mrs. Gertrude Faulk of Searcy and Mrs. Lillie Neal of Beebe.

WILSON, CONSTANT PERKINS—Dr. Cons P. Wilson of Fort Smith died April 1, 1932. Aged 47. His death followed a brief illness of pneumonia.

Dr. Wilson was a native of Fort Smith and had spent his entire life in this State with the exception of the World War period when he served as a captain in the Army Medical Corps.

County Societies

CRAIGHEAD-POINSETT COUNTY

(Reported by H. H. McAdams, Sec.)

The regular meeting of the Craighead-Poinsett County Medical Society should have been held on Thursday Eve., April 7, but on account of conflicting dates with the annual State Society meeting, it was postponed until April 14. The meeting was held in Jonesboro. A luncheon was served and immediately afterwards the following scientific program was rendered:

"End Results of Ruptured Appendix" by Dr. Troy Bogwell of Memphis. Discussions were by Dr. P. W. Lutterloh and Dr. H. H. McAdams.

YELL COUNTY

(Reported by Roy I. Millard, Sec.)

The Yell County Medical Society met in Ola, March 14, with the following present: Lee Montgomery of Gravelly, Tom Montgomery of Bluffton, E. C. Hunt and T. J. Pool of Ola, W. E. Ballenger of Plainview, and Roy I. Millard and E. J. Haster of Dardanelle. Visitors were: R. L. Smith, G. C. Webb and L. Gardner of Russellville; W. A. Montgomery, Walter Cale and E. P. Griffin of Atkins.

A motion to merge the Pope and Yell County Medical Societies was adopted unanimously, and the following officers were elected: President, E. P. Griffin, Vice-President, E. J. Haster, Secretary-Treasurer, Roy I. Millard.

It was agreed that the meetings be held alternately in Yell and Pope Counties, and that the second Thursday in each month be the regular meeting date, each meeting to be held in the form of a luncheon.

Dr. R. L. Smith reported a very interesting case of carcinoma of the transverse colon. This was followed by a general discussion of malignancies, with several cases outlined.

The meeting was adjourned to meet in Dardanelle, Thursday, April 14.

Samples and literature on request.

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Original Articles

ARTHRITIS AS A MANIFESTATION OF BACTERIOLOGICAL ALLERGY*

M. F. LAUTMAN, M. D., Hot Springs, Ark.

While much of the mystery which surrounds the etiology of arthritis still remains unsolved intensive investigation of the subject in recent years by many competent observers has brought forth quite a number of valuable facts concerning the cause of this disease. Most observers accede to the view that some infective process is primarily at fault in at least ninety five per cent of the cases and that such factors as diet, heredity, climatic conditions, glandular disturbances, etc., act either as predisposing or as precipitating causes. It is not intended to disclaim any portion of the generally accepted theories of the relationship of focal infection to arthritis. On the contrary, it is hoped that a clearer conception of the mechanism, in which a small collection of growing bacteria which cause few or no symptoms at their place of abode can produce such pronounced changes in widely separated and varied tissues, will strengthen our belief in the infectious nature or arthritis and its allied disorders.

Numerous attempts have been made in the past to link some specific type of organism with the etiology of arthritis. The streptococcus has been most actively investigated from this standpoint and from time to time some new variety of streptococcus is described as the specific etiological organism. A search of the literature of the past half century shows that numerous different types of streptococci have been described, each one of which was supposed to possess the distinct and specific property of inducing arthritic changes of one type or another so that on final analysis, it is becoming apparent that these are probably all primarily the same streptococcus which is exercising its well known propensity of changing from one type to another (1). It does not seem unreasonable to assume that, as time goes on, it will become increasingly evident that, as far as arthritis is concerned, we are dealing with one and the same type of streptococcus in all cases.

The tendency of the gonococcus to produce arthritis is generally recognized and needs no further discussion. In recent years, more and more importance is being attached to the colon bacillus as a possible factor in the production of arthritis and the part which the intestinal tract plays as a focus of infection is becoming more frequently stressed.

The notorious difficulty of cultivating specific organisms from the blood stream and the involved joints in arthritis has given rise to the belief that the arthritic syndrome is not due to a septicemia or a bactermia but that the joint manifestations and constitutional disturbances in arthritis are evidences of an allergic reaction to bacterial products. According to Zinsser (2) bacteriological allergy is a state of the body in which it becomes sensitized to a bacterial antigen probably from disintegration, in an inflammatory focus, of the organism concerned, and the pathological changes in the joints, harmful though they are, are in reality evidence of a defense reaction on the part of the body. He cites several reasons to support his belief that acute rheumatic fever, for example, represents an allergic state. He further believes that this allergic state accounts for the various kinds of organisms which have been recovered and finds it difficult to believe that this disease is caused by any single specific organism.

Pemberton (3) reasoning by analogy finds it quite conceivable that a body which has long harbored a definite infection, may become allergic to bacterial substances given off from the growing bacteria and in this way explains the nature of injury to tissue remote

*Read at the Invitation Clinical Conference held at Levi Memorial Hospital, October 1, 1931.

from the focus of infection. Accepting this known premise he finds it highly probable that the mechanism of some forms of arthritis will be found along the lines of sensitization to bacterial antigens.

Swift (4) summarizes his views of the question as follows: "There is much clinical evidence to support the contention that focal infection has an important bearing on the evolution of this disease but up to the present the importance of the focus was thought to rest in its role as a nidus from which the virus was disseminated throughout the body. Our conception of the focus, on the other hand, is of an area where the allergizing substance is produced and whence it is spread to sensitize the various tissues. This conception does not deny that virus may also gain entrance to the blood stream but stresses the allergizing effect of such a focus."

The exact mechanism involved in an allergic process is not clearly understood. Allergy to a food or plant protein, for instance, may produce defense reactions in the nasal or bronchial mucous membrane which clinically are recognized, respectively, as hay fever or asthma. This reaction is accompanied by vaso-motor disturbances in the mucous membranes, which if they remain unchecked, lead to chronic and permanent inflammatory changes in the involved tissues. The supposition, as far as arthritis is concerned, is that a body which has long harbored a definite infectious process becomes sensitized to some substance given off by the bacteria which may eventually induce certain vaso-motor changes in the joint structures. The persistence of these changes to chronicity induces a defense reaction in or about the joints which finally becomes manifest pathologically as inflammation, hypertrophy, new bone formation, etc., Pemberton in most of his recent work emphasizes the close relationship which exists between delayed or impaired circulation and pathological deviations in the joints. In experimental animals he has produced changes which closely simulate atrophic arthritis by mechanical interference with the circulation of the joint.

The writer is thoroughly in accord with these views and has attempted, with some measure of success, to translate this conception of the mechanism of infection in arthritis and rheumatoid conditions into terms of diagnosis and treatment. From a diagnostic standpoint, it has been found possible to determine the patient's sensitivity to a given bacterial poison by intradermal injection of various bacterial antigens. Patients with arthritis and rheumatoid conditions will usually show a positive response to one or more of the bacterial extracts, in much the same manner as individuals who are sensitive to food proteins will react to intradermal injection of the extracts of the offending proteins.

It has been found possible, in this manner, to determine more or less accurately, the nature of the offending organism.

From the standpoint of treatment, this allergic conception of arthritis naturally suggests the employment of some process of desensitization. In our hands, this was accomplished by subcutaneous injections of bacterial nucleoproteins corresponding to the offending organism. Clinically, this line of treatment, supplemented by the extirpation of infective foci, and general measures to improve the patient's physical condition has been found productive of favorable results in many cases.

It is not the intention of this paper, at this time, however, to enter into a description and discussion of the methods of preparation and the manner of employment of these bacterial nucleoproteins. It was intended merely at this time to emphasize the points which are mentioned in the following summary.

Summary

1. Evidence is at hand to indicate that in many cases the pathological condition found in arthritis and rheumatoid states are due to reactions which are in the nature of a bacterial allergy.

2. Intradermal injections of bacterial antigens frequently reveal the patient's sensitivity to a specific bacterial antigen.

3. Desensitizing injections of specific bacterial nucleoproteins have in many cases been found of great benefit in the treatment of arthritis and allied disorders.

1. Grinell: Jour. Bacteriol., 1928, 16, 117.
2. Zinsser: New York Academy of Med., 2nd Series, 1928, 4, 351.
3. Pemberton: Arthritis and Rheumatoid Conditions: Their Nature and Treatment. 1930, 35.
4. Swift, Derick and Hitchcock: Bacterial Allergy (Hyperergy) to Non-hemolytic Streptococci in its Relation to Rheumatic Fever. Jour. Am. Med. Assn., 1928, 90, 906.

CARCINOMA OF THE CERVIX UTERI*

W. R. Brooksher, Jr., A. B., M. D.
Fort Smith

The control of cancer is one of the most vital problems facing the medical world today. It has been estimated that there are 360,000 people suffering with cancer in the United States today and the disease now holds second place in the list of causes of death.

The disease attacks all parts of the body, yet 30 per cent of cancer in the female involves the uterus and 90 per cent of these uterine cancers originate in the cervix. Its proper and adequate treatment is therefore, a matter of prime importance. Due to anatomical conditions, cancer of the cervix uteri is by far the most dangerous form, one of the most difficult to cure and is also the most frequent. While the results in treatment of this disease are far from satisfactory, we are able to show a gain in the percentages of cures and palliations under modern therapeutic methods (1).

Cancer of the cervix is increasing and this increase is an actual one. Its cause, of course, is not fully known. There are many theories, some based on statistics, some on experiments some on clinical findings and others on hopes. Cancer is a disease of the cells, the unit of life, which have lost their growth restraint or inhibition (2). Though we have no definite knowledge as to the cause of cancer, we do know that it begins as a local lesion, which at one time in its clinical course, is amenable to radical removal or complete destruction. Furthermore, we know that cervical lacerations and chronic infections of the cervix which subject the cervical tissue to chronic irritation are precancerous factors.

Cancer can be cured by attacking it in its early stages. Unfortunately, early signs and symptoms are not typical and the diagnosis is frequently difficult. Pain is a late and most unfavorable symptom, indicating extension to the parametria and the regional lymph nodes. The irritated, the inflamed, the discharging cervix, no matter how mild in appearance, should receive the most careful diagnostic study. Each may be the forerunner of cancer. If necessary, biopsy is justified for accurate diagnosis, but its accuracy is dependent upon the skill of the operator in removing the correct piece of tissue and the judgment and experience of the pathologist.

Hemorrhage, leucorrhea and pain, the fundamental symptomatic triad of cancer of the cervix, frequently appear only when the disease is well advanced. Very slight bleeding, produced by minor degrees of trauma, such as defecation or gentle vaginal examination, may be the earliest symptom. Blood-tinged serous leucorrhea is often suggestive of cancer. The one dominant symptom is irregular or untimely bleeding and every woman presenting such a history, regardless of age, should have a thorough pelvic examination. Most difficult to distinguish are simple and early carcinomatous erosions where the decision rests solely upon biopsy.

The periodic health examination, particularly after child-bearing, is of utmost benefit in the early recognition of cervical cancer. Personal feminine hygiene as well as repair of lacerations and erosions are similarly of much importance. We doctors should ever be on the alert to recognize early symptoms and to make the proper examination of women patients if we would reduce the incidence of cervical cancer. It is not enough to educate women as to the necessity of heeding abnormal bleeding or discharge. Such education may bring the patient to the physician for examination, but what is her watchfulness worth if the physician fails to do his share by making a careful and thorough examination.

When one is confronted with a case of abnormal bleeding in a woman of cancer age, the first question should be "Is it or is it not cancer?" rather than "What are the causes of bleeding in this case?" If this frame of mind were general among the profession, a real advance could be made in the campaign against cancer. Even though a benign affair may be finally determined as the etiological factor; its correction, since these are constant predisposing causes, does much to protect that patient from cancer. Cancers that have been detected in this group of suspicious cases of bleeding are the ones that have given the largest percentages of cures.

Cancer of the cervix lends itself ideally to radium treatment whether early or advanced. Cancer of the cervix can be cured and radium can cure it. Crile says: "In cancer of the

*Read before the Arkansas County Medical Society, Stuttgart, Arkansas, March 8, 1932.

cervix the pre-eminent value of radiation appears to be well established.'' Coffey says, ''The ideal indication for radium is in cases where cancer invades an organ which is surrounded by other vital structures that must not be destroyed, as in cancer of the cervix.'' Wood says, ''It is perfectly evident that the time has passed for surgery of cancer of the cervix.'' Practically all surgeons are abandoning the surgical treatment of cervical cancer, realizing that it can best be treated by radiation. The radical Wertheim operation shows a primary mortality of over 17 per cent in the 80,000 cases reviewed by Lane-Calypon. Even in the most skillful hands, surgery has been confined to the early case. Borderline, recurrent and advanced cases are definitely in the field of radiology. Statistics are available to amply justify these conclusions. Memorial Hospital records show 81 per cent of early cases alive after three years, 66 per cent of the borderline, 42 per cent of the advanced and 49 per cent of the recurrent; results which are unequalled in any cancer clinic in the world. It must be remembered in a comparative study of surgical and radiation statistics, that the surgical figures are already selected, that is, represent only those women who were operated, while radiation figures include all patients who were treated.

The technic of the application of radium in these cases seems so simple that it is difficult to impress upon the casual observer that success and safety depend upon careful study of the location and extent of the disease, its type of cell, the degree of its maturity, the general physical state of the patient, of careful pre-operative care of the patient, the amount of radium used and its distribution in appropriate containers with the proper employment of screening, its correct positioning in situ where it will destroy the cancer and yet not damage adjacent viscera, the duration of the application, the time of re-radiations and finally, careful frequent follow-up examination. A personal experience in the observation of the action of radium in this disease over considerable periods of time is essential before one can competently undertake the treatment of cancer of the cervix by radio-therapy (1). This is in spite of the advertisements which state ''send us a description of your case and we will send radium with directions for use.'' Regaud says, ''It is necessary to have much experience to obtain from this method of treatment all the good that it may give without the evil that it may do.''

Radium, by its gamma rays, has a direct and selective action on cancer cells, destroying them without injuring the normal cells at the site of the tumor. This can be demonstrated in healed cervical cancer cases, where the normal shape of that organ is restored without evidence of the former lesion. Another effect of radiation is the proliferation of connective tissue which contracts to obliterate in a great degree the blood and lymph supply, producing the contracted, anemic-appearing cervix and the funnel-shaped vaginal vault as seen in ideally healed cases.

From a consideration of these factors we observe that if dosage suitable for a certain case is employed, the cancer cells will be destroyed but not the normal tissues. Larger doses will destroy the normal cells with resulting complications of necrosis, hemorrhages, fistulas and septic absorption. Should radium be used in too small amounts, the cancer tissues will not be destroyed.

The contra-indications to the use of radium are seven (3):

1. General emaciation and cachexia—in such cases rapid deterioration and death may ensue.

2. A red cell count below 3,000,000 or a hemoglobin of less than 40 per cent—radium may increase the anemia to a dangerous degree.

3. Hydro- or pyonephrosis—the fibrosis produced may increase the obstruction present.

4. Recto-vaginal and vesico-vaginal fistulas—intense local irritation with sloughing may be produced.

5. Pelvic inflammatory disease—massive necrosis is the likely consequence. This also applies to a foul sloughing condition of the growth itself.

6. Cases in which the whole pelvis is extensively infiltrated with extension from the cervical growth—the end appears to be hastened.

7. Impaired metabolism.

A proper dose must cause destructive radiation to reach all cancer cells and at the same time affect the surrounding tissue as little as

possible. Usually, 4000 to 6000 milligram hours of heavily filtered radium are applied to the cervix and broad ligament regions supplemented with cross-fire roentgen-ray therapy to the pelvis. Saline douches are employed until ulceration is healed and frequent follow-up examinations should be made to detect possible recurrences.

Following the local treatment of the lesion, the general physical condition of the patient should receive intensive study. Many complications arise during the so-called cancer age. The teeth, tonsils, sinuses, lungs and the cardio-vascular and renal systems must be carefully watched that the body resistance may be kept at a high point.

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ABSCESS OF THE TONGUE: TWO CASE REPORTS

Paul L. Mahoney, M. D., Little Rock

During the months of August and September, 1931, I had the rare opportunity of observing and treating two cases of abscess of the tongue. Failing to find mention of this condition in many of the standard textbooks, I became interested to the extent of obtaining literature on this subject from the package library of the American College of Surgeons.

Bennet has collected only 145 instances of acute disease of the tongue in a period of 93 years. I was surprised to find that so few cases have been reported in such a long period of time. The first case of abscess of the tongue was described in 1816. Since 1909, only a few cases have been mentioned, the last case report that I could find having been published in 1929. The last Index Medicus does not make mention of this condition. From the literature we must conclude that this condition either must be rare, that it is being overlooked, or that it is not thought to be of enough importance to warrant recording. Because these two were the only cases observed in our office during a period of more than twenty years and from the reports received from many of my confreres, I consider abscess of the tongue a rare condition. Since three deaths are mentioned in the reports of 145 cases collected from 1816-1909, it may prove to be a serious condition.

Case Reports

The first patient was a white male, age 34. Eight days following a tonsillectomy performed under local anesthesia, the patient began to complain of pain in the region of the base of his tongue. Soon the tongue become much swollen and fever, ear ache, swelling of the neck, difficult and painful swallowing, and some interference with breathing were elicited. The fourth day after the onset of these symptoms, he was brought to Little Rock and admitted to the hospital. His appearance was that of an emaciated man apparently suffering much pain. To make room for a greatly enlarged tongue his mouth was held partially open. The submaxillary glands were markedly enlarged; the submental region was brawny and board-like to the touch. Breathing was labored and any attempt to move the tongue was painful. His lips were very dry and covered along the edges with a licorice-colored material which also covered his teeth and gums. His temperature was septic in character and the general symptoms were those of an acute infection.

Nothing abnormal was found during the examination of the ears and nose. The floor of the mouth was pale in appearance and edematous to the extent that the tip of his tongue was resting on his upper teeth. His tongue was heavily furred. His mouth was forcibly opened and with the aid of a tongue depressor and laryngeal mirror inspection of the larynx and pharynx was made. The tonsillar fossae appeared to be in a stage of normal healing. The epiglottis was edematous and the base of the tongue was markedly swollen. The interior of the larynx could not be seen. The examination was concluded by palpation of the tongue which, while very painful, revealed the presence of fluctuation in the base of the tongue on the right side. A diagnosis of abscess in the base of the tongue on the right side was made and drainage without anesthesia was recommended.

The mouth was opened, the tongue carried to the left, and an electric cautery plunged into the posterior part of the right side of the tongue, the point being carried backward and

downward. The opening was made in this region to avoid hemorrhage which might prove very troublesome. An abscess was entered and a large amount of pus was liberated. As expected in this type of infection, recovery was rapid.

The second patient was a male, age 42, white, who gave the following, similar history. Several days after the extraction of a molar tooth, a pain began in the region of the base of his tongue. Within twenty-four hours even the swallowing of fluids caused great pain. These symptoms, associated with fever, ear ache, difficult breathing, and swelling of the neck, continued for several days. He was brought to Little Rock for consultation and treatment. Except that the swelling in the submental region was not so marked, the findings on examination were the same as those of the first patient. Inspection revealed the swelling to be more marked on the lateral aspect and base of the tongue on the left side. Palpation elicited fluctuation in these regions. The same procedure as instituted in the first patient was followed and an abscess entered with the escape of a large amount of pus. As with the first patient, convalescence was uncomplicated and rapid.

Abstract

THE GREAT COURSE OF MEDICAL ENDEAVOR: PRESIDENT'S ADDRESS

In the President's address before the American Medical Association at the Eighty-third Annual Session, New Orleans, May 10, 1932; E. H. Cary, Dallas, Texas (Journal, A. M. A., May 14, 1932), said in part: "Contributing perhaps more than any other factor to the furtherance of this scientific cultivation of medicine is the great channel the American Medical Association affords the different branches of medical knowledge, which collaborate therein, obtaining thereby the best opportunity for the highest development of our art. This great organization, imbued with this larger conception, centered its attention on education and on what could be accomplished through concerted educational zeal, as one of its chief claims for co-operative effort. So it came to pass that the great motif, from 1847 until now, has been the advancement of the science of medicine through educational achievements, so that both the theory and practice of medicine could be harmonized, through an ever growing art and science, for the good of humanity. When we speak of the achievements of the American Medical Association, we start with the educational program outlined by our forefathers, recognizing their wisdom and foresight and the fruits of their planting as they were ripened in the most orderly fashion by the astute leaders who have directed and guided the affairs of this great power and body. Strangely true most of this monumental work can be seen by these men who have survived and are here to see and enjoy the accomplishments of their planning. One of these men approaches the honorable age of the octogenarian, another has already achieved this remarkable goal—both are still contributing their unstinted interest and inspiration to the American Medical Association. While personal allusion is unnecessary, any student of our history will recognize these outstanding characters. No child of this parent body should ever grow so lusty, ambitious or proud as to disturb the confidence in, or function of, this great organization in building reliance in the policies of the profession as a whole. Voluminous data have been furnished me by the heads of the different departments which comprise the American Medical Association, making complete its service. I regret that time prevents me from presenting more of this information. No one man could comprehend the vast endeavors carried on by our organization without devoting time to a daily survey of the work being accomplished. I commend this ever increasing program of service to your attention, hoping that more of our members will visit headquarters and become acquainted with its high purposes and extensive and effective routine. It bridges the chasm between professional accomplishments and public needs."

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The advertising policy of this Journal is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

All communications of this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the State. Notice of deaths, removals from the State, changes of location, etc., are requested.

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LEGISLATIVE, education in medical and health laws and participation in such legislation as is requested or approved by the Medical Society to which we are auxiliary.

EDUCATIONAL, to aid the medical profession in its Health Education work through organizations to which we belong.

(a) by becoming informed ourselves.

(b) by accepting positions of leadership in such organizations, particularly on health committees, so that authentic literature may be chosen for programs and for distribution, and that informed speakers may be selected.

(c) by promoting the distribution of Hygeia, the health magazine published by the American Medical Association.

—Mrs. Arthur McGlothlan, St. Joseph, Mo., President, Woman's Auxiliary to the American Medical Association.

Abstracts

ABDOMINAL PAIN DUE TO HYPOTHYROIDISM

J. William Hinton, New York (Journal A. M. A., May 14, 1932), calls attention to hypothyroidism as a factor in producing abdominal pain, and emphasizes that patients giving negative roentgen evidence of changes in the gastro-intestinal tract, the gall-bladder and the genito-urinary region, as well as negative results in the other laboratory procedures, may in a small percentage of cases be suffering from hypothyroidism; in this group with negative roentgen observations a metabolic determination should be done before any treatment is instituted or before the patients are submitted to an exploratory laparotomy, as occasionally a diagnosis will be established and the symptoms relieved with thyroxine and thyroid extract, the patient being saved a needless operation. There seems little question that, in the past, probably quite a few exploratory procedures have been undertaken with negative results or at least with symptoms persisting after the operation, in which case the entire trouble was referable to the thyroid gland. The condition is probably due to a hypoperistalsis with a pylorospasm and retention of undigested food in the stomach; after the patient vomits the retained food, or the stomach slowly empties, the symptoms are relieved. The author does not want to leave the impression that all patients with abdominal pain in which the roentgenologic observations are negative are suffering from hypothyroidism, for such is not the case; but if this condition is borne in mind a definite diagnosis can be made in a small percentage of cases, and the individual can be benefited by the proper medication. On the other hand, a patient may have a minus metabolic rate and a definite intra-abdominal lesion which will need either medical or surgical treatment. Of course, no benefit could be expected from the abdominal pain by treating the hypothyroidism and neglecting the other condition that is actually causing the pain.

RELATIONSHIP OF THE PRIVATE MEDICAL PRACTITIONER TO PREVENTIVE MEDICINE

Sir Arthur Newssholme, Birmingham, England (Journal A. M. A., May 14, 1932), outlines briefly developments and changes during recent decades, in Europe generally and particularly in Britain, in preventive as related to clinical medicine, and the influence of this altered orientation on the work of the private medical practitioner. His sketch of European developments is prefaced by the following postulates: 1. Neither instructed public opinion nor the medical conscience, which in this connection is the advance-guard of Christian civilization, can tolerate the continuance of neglected sickness. 2. Medical care in its widest sense must be made available for all, as an important element in securing maximum efficiency and happiness in a civilized community. 3. Gaps and imperfections in present medical services must be made good and medical care must be of a quality which does not lack in any essential respect all that is necessary for expeditious recovery or for comfort, if recovery is unattainable. 4. Health is worth whatever expenditure is efficiently incurred in its maintenance or to secure its return. 5. In present circumstances, both in America and in Europe, adequate scientific medical service has become unattainable by isolated or family effort standing alone, for a high proportion of the total population. 6. For a large portion of the total sick population measures must be, and in part are already, organized to assist in providing necessary medical services, the sources available being private charity, communal taxation, and provident insurance for future needs. 7. There is need to organize such co-operative work as will secure that specialism, which necessarily is concerned mainly with the disease, is not allowed to submerge the wider and wiser outlook of the general practitioner who is concerned with the patient himself. 8. There is often needed a study of the patient from a psychic, social, economic and occupational standpoint, if his illness is to be accurately diagnosed and satisfactorily treated. 9. Modern medicine is becoming increasingly physiologic and decreasingly pathologic.

Personal and News Items

Ashley County Medical Society met at Montrose, March 10, 1932. The president, Dr. W. S. Norman, presiding. Dr. John C. Simpson read a paper on "The Microscope and Its Advantages in Medical Practice." After the meeting, an oyster supper was given by the society for its members and guests.

The Crawford County Medical Society has changed its time of meeting from the evening to noon, the last Tuesday in each month. The following are the officers elected for the ensuing year: President, John Stewart, Van Buren; Vice-President, John B. Trice, Van Buren; Secretary-Treasurer, Frank G. Engler, Mountainburg.

The Arkansas and Lonoke County Medical Societies held a joint meeting in Stuttgart, Tuesday evening, May 10, 1932, with the following present: Street, Benton, Corn, Callahan, Watson, Ward, Beaty, Crowgey and Harris from Lonoke County; Porter and Wilson from Prairie County; Fowler, Rasco, Park, Whitehead, Dicken, Drennen, John and Neighbors from Arkansas County. Visiting doctors were: E. H. White and P. M. Fulmer from Little Rock. Mr. French Roe, representative for the Upjohn Company, was present as the guest of Dr. M. C. John.

This was primarily a social meeting, however, a round table discussion of "fractures" was had with much helpful discussion.

Dr. Harvey S. Thatcher, Department of Pathology, University of Arkansas, School of Medicine, Little Rock, attended the National Pathological Society in Philadelphia. He reports as one of the features of the program a paper dealing with yellow fever. The work was by W. A. Sawyer, S. F. Kitchen and Wray Lloyd. The virus is used for the vaccination which was fixed for mice and immune serum. The marvelous results obtained surely will make this vaccination of great practical importance. We have often heard in this country that the stegomyia fasciata would come here some time by plane from infected districts. This vaccine gives us hope if such an epidemic occurs.

The following Arkansas physicians attended the annual meeting of the American Medical Association, held in New Orleans, May 9-13, 1932:

Bathurst, William R., Little Rock; Burge, J. H., Lake Village; Cazort, Alan G., Little Rock; Cox, Aris W., Helena; Crandall, Matthew C., Wilmot; Daniel, Sam G., Marshall; Gibbs, Arthur Myers, Hamburg; Goldstein, Davis W., Fort Smith; Hastings, Gordon, Little Rock; Hinkle, Shelby B., Little Rock; Horn, Samuel W., Bessemer; Kolb, A. C., Hope; Lee, D. C., Hot Springs; Moulton, Herbert, Fort Smith; Moulton, Everett C., Fort Smith; Murphy, Henry H., El Dorado; Phillips, P. H., Ashdown; Preston, H. Hansell, Hot Springs; Rhinehart, D. A., Little Rock; Richardson, Fount, Fayetteville; Rodgers, Porter R., Searcy; Sullivan, Arthur G., Hot Springs; Woods, R. P. Altheimer; Foltz, James A., Fort Smith; Hesterly, Jacob B., Prescott; Hutchinson, W. A., Texarkana; LeVine, David, El Dorado; McLeod, G. F., Magnolia; Mitchell, J. G., El Dorado; Moore, Jno. A., El Dorado; Purifoy, Leslie A., El Dorado; Robins, Ruel R., Texarkana; Shuffield, Jos. F., Little Rock; Smith, J. Murry, Smackover; Vinsonhaler, Frank, Little Rock; Wilson, John S., Monticello; Caruthers, C. K., Pine Bluff; Carrigan, P. B., Hope; Carrington, H. K., Magnolia; Cox, Allen E., Helena; Diederich, Victor P., Hot Springs; Douglas, S. W., Eudora; Horn, William H., Taylor; Hudson, Thomas F., Luxora; Nowlin, R. R., State Sanatorium; Riley, J. D., State Sanatorium; Butts, James W., Helena; Gates, Stanley M., Monticello; Kosminsky, L. J., Texarkana; Melson, Oliver C., Little Rock.

FIRST COUNCILOR DISTRICT AND NORTHEAST ARKANSAS MEDICAL SOCIETY MEETING

The society held its spring meeting at Walnut Ridge, April 21, 1932. It being one of the most successful and well attended meetings in the history of the society.

Those present were: T. C. Guthrie, Smithville; J. A. Dillman, F. M. Scott, J. H. Lamb R. H. Haley, Sr., W. E. Ellington and W. M. Majors, Paragould; L. H. McDaniel, Tyronza; E. W. Thornton and J. E. McGuire, Piggott; J. B. Futrell, W. J. Blackwood and W. O. Parrish, Rector; H. B. Hull, Mammoth Spring; J. C. Hughes, Hoxie; J. T. Altman, R. M. Jernigan, H. A. Stroud, J. C. Young, R. M. Barrett, Jonesboro; O. H. Clopton, Marmaduke; W. W. Verser, Harrisburg; J. T. Polk, Keiser; N. B. Ellis, Wilson; C. C. Ball, Ravenden; F. D. Smith, P. L. Tipton and A. M. Washburn, Blytheville; I. M. Huskey, Cave City; R. L. Purnell, L. C. McVay, Marion; Frank Nisbett, Brookland; J. H. McCurry, Cash; W. E. Hughes and J. W. Ryburn, Pocahontas; Chas. D. Tibbells, Black Rock; R. L. Hutchinson, Delaplaine; W. S. Kindall, Strawberry; A. G. Henderson, W. W. Hatcher and J. C. Poindexter, Imboden; W. J. Robinson, Portia; J. P. Hiller, Pollard; C. W. Garrison, G. W. Reagan and E. T. Ponder, Little Rock; E. E. Francis, B. F. Turner, J. A. Crisler, Sr., R. E. Flack, H. D. James, M. B. Hendricks, R. L. Sanders, L. C. Sanders, Henry G. Hill, W. T. Pride, Memphis, Tenn.; J. C. Land, T. C. Neece, H. R. McCarroll, Wallace Hartman, T. Z. Johnson and Marshall Allen, Walnut Ridge.

The program follows:

Called to order by the president, J. C. Land at 10:00 o'clock.

Invocation—Rev. M. F. Langley.

Address of Welcome on behalf of Walnut Ridge and the Lawrence County Medical Society—Hon. Harry L. Ponder, Walnut Ridge.

Response to the Address of Welcome—Dr. H. A. Stroud, Jonesboro.

"Trend of Present Day Medicine"—Dr. W. O. Parrish, Rector.

"Etiology, Prevention and Treatment of Urethral Stricture"—Dr. W. G. Reagan, Little Rock.

"Fractures"—Dr. Henry G. Hill, Memphis.

Councilors Address.

Adjournment for luncheon, which was served in the basement of the First Methodist Church, by the ladies auxiliary of the church.

Afternoon Session—Called to order at 1:30 p. m.

President's Address.

"Medicine as a Business"—Dr. B. F. Turner, Memphis.

"Cause of Long Labors and the Use of Drugs Therein"—Dr. W. T. Pride, Memphis.

"Adenomatous Goitre"—Dr. J. A. Crisler, Sr., Memphis.

"Therapeutic Review of the Arsphenamine Group"—Dr. N. B. Ellis, Wilson.

Dr. F. D. Smith was re-elected secretary and treasurer.

The fall meeting will be held in Mississippi County.

REPORT OF THE EIGHTH ANNUAL SESSION OF THE WOMAN'S AUXILIARY TO THE ARKANSAS MEDICAL SOCIETY

(Mrs. Marcus T. Smith, Conway)

The Eighth Annual Session of the Woman's Auxiliary to the Arkansas State Medical Society opened in Little Rock, Tuesday, April 5, for a three day meeting with the Woman's Auxiliary to the Pulaski County Medical Society as hostess. Registration continued throughout the morning in charge of Mrs. Anderson Watkins. An Executive Board meeting was held at 10:00 a. m.

At. 1:15 p. m., the first general session convened in the ball room of the Marion Hotel. This was a joint meeting with Dr. D. A. Rhinehart, President, Arkansas Medical Society, presiding.

After the Invocation, addresses of welcome and introductions, Mrs. A. B. McGlothlan, St. Joseph, Mo., President of the Woman's Auxiliary to the American Medical Association, and the honor guest of the convention, spoke on "The Medical Profession, the Auxiliary and the Public." This was followed by the President's Annual Address by Dr. D. A. Rhinehart.

From 4:00 until 6:00 p. m. the Pulaski County Auxiliary entertained all visiting ladies and delegates at a tea, at the home of Mr. and Mrs. Arthur Alexander, parents of Mrs. Martin Hawkins, Jr.

Receiving with Mrs. Hawkins, were Mrs. W. R. Brooksher, Jr., Fort Smith, president of Woman's Auxiliary to the Arkansas Medical Society. Mrs. D. A. Rhinehart, president of the Woman's Auxiliary to the Pulaski County Medical Society; Mrs. A. B. McGlothlan, president of the Auxiliary to American Medical Association; Mrs. C. E. Oates, president of Auxiliary to the Southern Medical Society; Mrs. P. H. Phillips, Ashdown; Mrs. S. A. Collom, Texarkana; Mrs. C. G. Hinkle, Batesville; Mrs. B. A. Rhinehart, Little Rock; Mrs. T. G. Porter, Hazen; Mrs. Pierre Redman, Fort Smith; Mrs. C. T. Drennen, Hot Springs; Mrs. G. A. Hebert, Hot Springs; Mrs. Dewell Gann, Sr., Benton; Mrs. William Hibbitts, Texarkana; Mrs. Marcus T. Smith, Conway; Mrs. Homer Scott and Mrs. L. D. Reagan, Little Rock. The reception rooms were artistically decorated with quantities of apple blossoms and spring flowers.

The table in the dining room, laid with an exquisite lace cover, was graced in the center with a handsome silver vase filled with Easter lilies flanked with three-branched crystal candelabras with white lighted tapers. Mrs. Anderson Watkins and Mrs. C. W. Garrison poured tea and coffee, assisted by Mrs. H. Fay Jones, Mrs. Hoyt Allen, Mrs. Alan Cazort, Mrs. Byron Bennett, Mrs. W. E. Gray, Jr., Mrs. S. C. Fulmer, Mrs. Randolph Smith, and Miss Charlotte Hawkins of Parkdale. Further assisting in the house were Mrs. Merlin Kilbury, Mrs. A. C. Shipp, Mrs. F. W. Carruthers, Mrs. R. M. Eubanks, Mrs. R. C. Kory, Mrs. W. L. Sadler and Miss Louise Alexander. Two hundred guests attended.

Tuesday evening, the annual president's reception and ball of the Arkansas Medical Society was held at 8:45 in the ball room of the Hotel Marion. The room was effectively festooned with smilax and pink roses to represent a rose garden. An orchestra furnished music for dancing. The guests were received by Dr. H. Fay Jones, president of Pulaski County Medical Society, and Mrs. Jones; Dr. D. A. Rhinehart, president of the State Society, and Mrs. Rhinehart; Mrs. A. B. McGlothlan, president of Woman's Auxiliary of American Medical Association; Mrs. Chas. E. Oates, president of the Southern Medical Auxiliary; Mrs. W. R. Brooksher, Jr., Fort Smith, president of State Woman's Auxiliary; Dr. Will H. Mock, Prairie Grove, president-elect of the Arkansas Medical Society; Dr. W. R. Bathurst, Secretary of State Society, and Mrs. Bathurst, and Mrs. P. H. Phillips, Ashdown, president-elect of the State Auxiliary.

During the evening, a style show was presented by M. M. Cohn Company featuring bathing apparel, tea pajamas, morning costumes, afternoon gowns and dresses for a wedding party. A run-way was arranged the length of the ball room for the models. An elaborate buffet supper was served at midnight to several hundred guests.

Wednesday at 8:30 a. m., a joint Memorial Service was held in memory of twenty-six members of the Arkansas Medical Society

and two Auxiliary members—Mrs. F. L. French, Little Rock, and Mrs. W. V. Laws, Hot Springs.

The Memorial session was called to order by the President, Dr. D. A. Rhinehart. Invocation—Rev. Calvin B. Waller, Pastor, Second Baptist Church. "No Shadows Yonder"—Duet, rendered by Mrs. I. J. Steed, soprano; Mrs. W. R. Richardson, contralto, and Mrs. S. R. Crawford, pianist.

An address was given by Dr. E. E. Barlow, Dermott.

Immediately following the Memorial Service, the business session of the Auxiliary was held in the Kahn Room of the Marion, with the President, Mrs. Wm. R. Brooksher, Jr., presiding. At this meeting, Dr. D. A. Rhinehart addressed the session, after which reports were heard and the election of officers was held. The following officers were elected for 1932-33; President, Mrs. P. H. Phillips, Ashdown; President-elect, Mrs. B. A. Rhinehart, Little Rock; Vice-President, Mrs. Wm. Hibbitts, Texarkana; Publicity, Mrs. Curtis Jones, Benton; Historian, Mrs. C. W. Garrison, Little Rock; Parliamentarian, Mrs. H. H. Smith, Fort Smith; Directors, Mrs. M. C. John, Stuttgart, and Mrs. R. C. Dorr, Batesville.

Two outstanding recommendations adopted were: That Mrs. Chas. E. Oates be chairman of the Ilse F. Oates Student Loan Fund so long as she saw fit, and one confirming the membership of the Arkansas Auxiliary in the Arkansas Council of Women.

Mrs. Brooksher gave the President's address after which the session adjourned to meet at 1:00 o'clock for a luncheon at the Country Club, with Mrs. D. A. Rhinehart as toast-mistress.

The tables were lovely with silver bowls of Easter lilies, yellow snapdragons and jonquils. A yellow and green color note was accentuated in the menu. Favors were pocket memorandums tied in yellow and green ribbons. Mrs. Ben V. Searcy sang "God Touched the Rose," by Brown, "From the Land of the Sky Blue Water," by Cadman and "The Star," by Robers with Mrs. S. R. Crawford at the piano. "Cradle Song," Kreisler; "Dance Negre," Scott and "Juba Dance" by Dett were given by Mrs. Bertha Kirby Nelson. An address was made by Mrs. A. B. McGlothlan, President, Woman's Auxiliary to the American Medical Association. Mrs. W. R. Brooksher, Jr., retiring State President, gave an address which was followed by the installation of the new officers.

Honor guests were: Mrs. A. B. McGlothlan, President, Woman's Auxiliary to the American Medical Association; Mrs. S. A. Collum, Past President, Woman's Auxiliary to the Southern Medical Association; Mrs. Chas. E. Oates, President Auxiliary to Southern Medical Association; Mrs. W. E. Gregg, President of the Auxiliary to Tennessee Medical Society; Mrs. W. T. Black, President of the Shelby County (Tennessee) Auxiliary; Mrs. W. T. Brown, member of Shelby County Auxiliary and Mrs. DeShiel of Los Angeles, California.

A "Dutch Treat," supper Wednesday evening at seven-thirty at the Albert Pike Hotel, with a moving picture show party afterward concluded the social affairs. A "Round Table" discussion at nine-thirty Thursday morning in the Palm Room of the Hotel Marion concluded the business meeting.

MONTGOMERY WARD & CO. UNDERTAKES URINE EXAMINING SERVICE*

The A. M. A. Chemical Laboratory reports that in a recent catalogue, "Ward's 60th Anniversary—1872—Sixty Years of Progress—1932," appears an advertisement of a "new professional service." In bold face type appears: "Your urine should be analyzed at least every 90 days." It is inferred, of course, that this repeating service may be secured through Montgomery Ward & Co. The A. M. A. Chemical Laboratory requested five persons to send orders to Montgomery Ward & Co., accompanied by the required money order for $1.50. In due time there came from the firm an invoice addressed to each person with the statement that within a few days a container would be received with full instructions from "our laboratories." Shortly afterwards, each individual received through the mail a container and bottle which did not come from the Montgomery Ward & Co. home laboratories, but from the Universal Research Laboratories, Minneapolis, Minn. The American Medical Association has no information in its files concerning the Universal Research

Laboratories in Minneapolis, nor have these laboratories been approved by the Council on Medical Education and Hospitals. Four specimens of urine, found pathologic by a competent investigator, and one specimen which was determined to be normal, were sent. In a few days came letters stating that the urinalysis report was enclosed; in each case the letter was almost the same except for the numbers indicated on the report. The letters were written on the stationery of the Universal Research Laboratories and bore the name of "H. W. Darby, M. D., Director." A typical letter contained the following: "Your urinalysis has been completed and we are enclosing your report herewith. In checking your report we note indications 5, 25 and 26 show a little faulty but you can correct these, if you follow directions set forth below the faulty indications, which are self explanatory. Your report is very encouraging nevertheless it is a good idea for you to have these examinations from time to time to check yourself and protect your health." The reports did not indicate that a painstaking examination of the specimens had been made. For each of the pathologic specimens it was stated that the report was "very encouraging." In no case did the results reported agree with the character of the urine sent. (Jour. A. M. A., April 30, 1932, p. 1561.)

*Following publication in The Journal of the American Medical Association of the report of their laboratory relative to its survey of the urine examining service conducted by Montgomery Ward & Company, many physicians throughout the country wrote to Montgomery Ward & Company asking for an explanation of this project. They replied, "Upon careful investigation we have found that their position in the matter was in large part justified, although the check test which we make before adopting the service had indicated their (Universal Research Laboratories) analyses to be accurate. Because of these new developments we have discontinued the service, and are accepting no further orders."

MAIL ORDER URINE TESTS

The American Medical Association Chemical Laboratory has published a report relative to a urine examining service conducted by Montgomery Ward & Co. Various concerns have endeavored to exploit this plan commercially during the last ten years, but it is, however, a new departure for a mail order organization to undertake such a service. Every physician knows that a mere examination of the urine without a physical examination and without a careful study of the patient in person may be more misleading than valuable, so that even if the urine service were perfect, its utility would still be problematic. When, however, the service is of the character that this one seems to have, it becomes a menace to the user. Since the article on the Universal Research Laboratories was prepared evidence has become available that the company is actually owned by Warner's Renowned Remedies, a firm which manufactures a goiter remedy, and which deals largely with department stores and mail order houses. (Jour. A. M. A., April 30, 1932, p. 1566.)

RECOMMENDATIONS OF WHITE HOUSE CONFERENCE WITH REFERENCE TO CRIPPLED CHILDREN AS THEY ALREADY APPLY TO ARKANSAS

The Children's Charter of the White House Conference on Child Health and Protection recognizes the rights of the child as the first rights of citizenship and pledges itself to these aims for the children of America. The Children's Charter has set a standard for child care throughout the continent and the "measuring stick" to be used by State and local officials, by our public schools and by welfare agencies in every part of the United States.

The recommendations of the White House Cenference as found in the Children's Charter are expressive, complete and conclusive in dealing with the crippled child and his needs and of all the groups the crippled child received the largest attention, for there is much to be said and more to be done in behalf of those children than with any other group.

In applying the measuring stick of the children's Charter as it relates to the crippled child in Arkansas, we make some interesting discoveries which should challenge every fair-minded person in the State and the people who are truly concerned with the crippled child as an individual with ability and eventually to find a place in the world's work rather than with institutions and agencies and who will give serious attention to these recommendations. No longer should it be assumed that a brace, a clinic, or a hospital bed is the sole answer to the crippled child problem, the White House Conference and

how these recommendations already apply to the State of Arkansas.

The first recommendation of the White House Conference, "that each State must have laws and machinery so that all crippled children must be reported to some responsible department, city, county, or State," is already a provision in Arkansas, for in 1929 through the efforts of the Arkansas Society for Crippled Children, the Legislature passed a law creating such machinery which is the State Crippled Children's Commission as the responsible body to which the names of crippled children should be reported.

The second recommendation of the White House Conference has to do with making special medical and surgical care available to every crippled child irrespective of creed, color, or irrespective of whether he lives in the county or city has also been provided for by the same law which created the State Crippled Children's Commission.

Another recommendation, "that every crippled child wherever he may be, received an education at public expense and that his education include vocational guidance, training and placement, of a type that will secure and safeguard remunerative employment" is also made possible by this same law.

Still another recommendation, "that a proper distribution of beds for acute convalescent and custodial cases be secured and that adequate follow-up service and parental co-operation be planned" is also one of the provisions of the act which has made possible a great State program for the education and rehabilitation of crippled children in Arkansas. Yet little or nothing is known of this Arkansas program for physically handicapped children, a program designed to bring relief and educational advantages to crippled children in their own communities.

There is a great economic value in a decentralized program into which may be fitted all schools and hospitals in the State. Arkansas has the foundation for permanent benefit and permanent value in this splendid law. It has many existing facilities widely distributed which could easily and quickly be developed in the care and education of crippled children. Yet the public is blind to the needs of crippled children and to the fact that Arkansas has the foundation for great benefit to these unfortunates. Many States have programs for crippled children which include not only hospital service but special classes and special schools—all paid for at public expense which is realized as the only way the crippled child will receive his birthright of Health and Education. Missouri, Ohio Michigan, Wisconsin, California, New York, Oklahoma, Nebraska, Minnesota, New Jersey, Kentucky, West Virginia, Florida, are some of the States having such facilities in widely distributed areas. These many States have provided special instruction in class rooms fitted with proper chairs, and have come to the realization of the need to "fit the school to the child" rather than the child to the school and have arranged for busses for transporting their handicapped children. These schools also have special gymnasium equipment and proper medical care for those it will benefit. The people of these other States know that it is only economic foresight which gives these children the best training possible in public schools as a preparation for life.

The handicapped child meets the world at a physical disadvantage. It is thoughtless and cruel to add to that—the mental handicap of lack of training for competition he must face if he is to earn a livelihood and hold a place comparable with that of the normal person in the economic work.

No funds have been appropriated to make the program operative in Arkansas. A greater public understanding of the law and a greater public understanding of the duties of the State Crippled Children's Commission will result in the State doing its full duty to its handicapped childhood. To make the recommendations of the White House Conference operative as they apply to crippled children it is necessary for public opinion to make it self manifest.

President Hoover has said:

"In the field of deficient and handicapped children, advancing knowledge and care can transfer them more and more to the happy lot of normal children. And these children, less fortunate as they are, have a passion for their full rights which appeals to the heart of every man and woman. We must get to the cause of their handicaps from the beginnings of their lives. We must extend the functions of our schools and institutions to help them as they grow. We must enlarge the services of medical inspection and clinics, expand the ministrations of the family doctor in their behalf, and very greatly increase

the hospital facilities for them. We must not leave one of them uncared for."

The citizens of Arkansas have it within their power to remedy this long period of neglect of a substantial proportion of the school population. In counties where intensive work has been done, the ratio of the number of cripples is six in each thousand inhabitants. What is to be done about the situation? What is to be done about bringing equality of educational advantages rests with the people and the school officials of the State.

Obituary

CRUMP, JAMES FRANKLIN—Dr. J. F. Crump of Pine Bluff, aged 58, died May 6, 1932. He suffered a stroke of paralysis and death resulted in less than forty-eight hours.

He was a native of Cleveland County, and after his graduation from the Arkansas University, School of Medicine, returned to Rison to practice. He moved to Pine Bluff about nineteen years ago, and began specializing in the work of the eye, ear, nose and throat.

Dr. Crump is survived by his wife; two daughters, Mrs. Lauriene Gore and Miss Hazel Crump, and two sons, Jesse and George Crump, all of Pine Bluff; also by two brothers, R. E. Crump, Shawnee, Okla., and George E. Crump, Millsaps, Texas.

MUNN, JESSE B.—Dr. Jesse B. Munn of Vilonia, aged 78, pioneer physician of Faulkner County, died May 5, 1932.

Dr. Munn was a native of Tennessee, where he was born March 28, 1854, but came with his parents to Arkansas at the age of seven. He was a graduate of the medical college of the University of Arkansas and had practiced medicine at Vilonia for nearly a half-century. He was one of the most widely known and highly respected citizen of the county. For almost forty years he was a member of the school board of the Vilonia district and gave much of his time and efforts to the development of educational interests. For a number of years he was one of the directors of the Bank of Conway.

Dr. Munn is survived by his wife and one son, Dr. Elmer J. Munn of El Dorado, and three grandchildren.

COTHAM, EDWARD RALPH—Dr. E. R. Cotham of Monticello, aged 51, died April 30, 1932. He had been in ill health for several months, and had just returned from New Orleans where he had been for treatment. He was a graduate of the Jefferson Medical College, Philadelphia, and had practiced medicine in Monticello since finishing his interne work about thirty years ago.

Dr. Cotham enlisted in the United States Medical Corps at the beginning of the World War, serving overseas for several months.

He is survived by his wife, a son, Ralph Cotham, Jr.; his mother, Mrs. N. L. Cotham of Tillar; two sisters, Mrs. Jeff Harrell, Tillar, and Mrs. Una McCrory, Hot Springs; four brothers, Judge C. T. Cotham and Bruce Cotham, Hot Springs, Terrell Cotham, San Antonio, Texas, and A. T. Cotham, Monticello.

DRENNEN, CHARLES TRAVIS—Dr. C. T. Drennen, Hot Springs, died April 26, 1932. Aged 67.

Dr. Drennen was born at Hanby's Mills, Alabama, and was a graduate of the Rush Medical School, now the University of Chicago. He had been a resident of Hot Springs for nearly forty years, and had served as president of the Garland County Medical Society, the Arkansas Medical Society, and the Tri-States Medical Association.

He organized the first training school for nurses in Hot Springs and for several years was closely identified in an official capacity with that organization. He was secretary of the first Board of Medical Examiners appointed by the government, and it was mainly through his efforts the present Gantt Law was passed, which put an end to the drumming and soliciting of patients in this State.

Dr. Drennen is survived by his wife, a sister, Mrs. F. M. Aldridge, Tulsa, Okla.; and two brothers, J. L. Drennen, Washington, and Walter Drennen, Orlando, Fla.

COTHERN, THADDEUS E.—Dr. Thad Cothern of Jonesboro, aged 52, died May 17, 1932.

Born at Walcott, July 27, 1880, of pioneer stock, his parents having migrated from the Atlantic Coastal plains of the Carolinas and Georgia. His life should be an inspiration to youth. As in the case of many successful

men, it was young Cothern's mother who planted in the boy the seeds of ambition. Like many other country lads, he relieved lonely nights by reading. What newspapers that were available were read and re-read, and an autobiography of Benjamin Franklin became a sort of bible to him, and no better incentive to ambition and effort could have been afforded him.

At the age of seventeen, he went to Paragould, where he attended the Thompson Classical Institute, and finally emerged with a B. S. degree. The next step was to get a medical education. He taught school, worked in lumber camps, clerked in stores, did any and everything which he could get to do to earn money. Then he entered the Hospital Medical College at Memphis, where he graduated in 1905. He returned to Walcott, where he practiced his profession for a short time before moving to Jonesboro.

Dr. Cothern first joined the Greene County Medical Society, and after moving to Jonesboro, transferred his membership to Craighead County. In 1909 he attended the Arkansas Medical Society's annual meeting, and since then had been a consistent worker for organized medicine.

When the call to arms came, he tried to enlist but at first was rejected because of over weight. He was rejected four times, but persisted and finally was accepted and was given a captain's commission. After the war he was commissioned a captain in the Medical Reserve Corps. Later he was advanced to major. He has served as Councilor of the State Medical Society and as a member of the State Board of Medical Examiners. He was chosen President-Elect of the Arkansas Medical Society at the El Dorado meeting in 1928, and was advanced to the presidency in 1929.

He is survived by his wife, two daughters, Letha Cothern of Jonesboro and Mrs. Gladys Barbee of Memphis; a son, William Cothern of Jonesboro; two sisters, Mrs. Elmer Harris and Mrs. Joe Parker, both of Paragould; a brother, Tom Cothern of near Jonesboro, and his father, Presley Cothern of Paragould.

IN MEMORIAM

DRENNEN—Another prop and pioneer of the medical profession has left us all too suddenly and too soon, at the age of 68.

Charles Travis Drennen was a friend to man; he was a friend to the friends of Arkansas and Hot Springs as a civilian and professional gentleman; he was a fighter and usually on the winning side—the side of right; he was positive in all his stands, without being dogmatic. Some people maybe could not understand his motives, but those who were capable of thinking reasonably were his admirers and they were many. Permit me to say that I have always thought I was one of these many who understood and admired his courage and will always miss him greatly.

A Friend—J. C. Minor.

County Societies

LAWRENCE COUNTY

(Reported by H. R. McCarroll, Sec.)

The Lawrence County Medical Society held its regular monthly meeting in Walnut Ridge, Tuesday afternoon, May 10, 1932, with Dr. T. C. Neece.

Present: C. C. Ball, T. C. Guthrie, W. W. Hatcher, A. G. Henderson, J. C. Hughes, W. S. Kendall, J. C. Land, H. R. McCarroll, T. C. Neece and W. J. Robinson. Visitors were: Drs. E. L. Gibson, J. C. Poindexter and C. C. Townsend.

The following papers were read:

"Hydrocephalus," Report of a Case, by C. C. Ball, Ravenden.

"Tularemia," by W. W. Hatcher, Imboden.

"Episiotomy," by H. R. McCarroll, Walnut Ridge.

It was decided to hold the next meeting at Wau Taugua Springs, near Ravenden.

MISSISSIPPI COUNTY

(Reported by F. D. Smith, Sec.)

The Mississippi County Medical Society held its regular meeting at the Blytheville Hospital, May 3, 1932. The following were present: Oscar Barksdale and N. B. Ellis, Wilson; C. M. Harwell and W. J. Sheddan, Osceola; T. F. Hudson, Luxora; J. A. Saliba, P. L. Tipton, I. R. Johnson, A. M. Wash-

burn, C. E. Wilson, M. O. Usrey, F. L. Husband, W. A. Grimmett and F. D. Smith, Blytheville. Visitors: Thos. D. Moore, J. L. McGehee, Lyle Motley and W. D. Stinson, Memphis, Tenn.; J. R. McDaniel and J. W. Robbins, Steele, Mo., and Lawrence Cooper, Cooter, Mo.

The scientific program was as follows:

"The Present Day Mortality Rate of Appendicitis," by J. L. McGehee, Memphis.

"Malaria," by T. F. Hudson, Luxora.

Refreshments were served by the hospital personnel.

The next meeting will be held at Wilson, June 7.

SALINE COUNTY

(Reported by Thos. C. Watson)

The Saline County Medical Society was host to members of Grant and Hot Spring Counties Societies, Monday evening, May 2, at dinner at the "Corner Cupboard." Guests were Colonel Denton and Major Trout of the Army and Navy Hospital, Hot Springs, and Dr. R. F. Darnall of Little Rock.

The scientific program was furnished by Major Trout and Dr. Darnall. Major Trout discussed Army and Navy Hospital procedures in "Dehydration Treatment of Head Injuries," "Hand Infections," and "Diagnosis of Appendicitis."

Dr. Darnall discussed "Mental Sickness." He spoke of its early diagnosis and treatment by the family physician before the patient is seen by the trained psychiatrist.

The Hot Spring County Medical Society extended an invitation to meet with them Tuesday evening, June 7, at Malvern.

YELL-POPE COUNTY

(Reported by Roy I. Millard, Sec.)

The Yell-Pope County Medical Society met in regular session at the Ploss Hotel in Dardanelle, April 14, 1932.

Present were: Griffin of Atkins; Love, Haster and Millard of Dardanelle; R. L. Smith, L. M. Smith, Tate, Scarlett, Webb and Gardner of Russellville; Clements of Rover, and Gillum of Ola. Visiting doctors were: Robinson of Blaine; Billingsley and Kirkland of Fort Smith; Bruce of Morrilton; Colay of Cleveland, and John Smith of Paris.

The scientific program was as follows:

"Preventive Pediatric Problems," by Dr. C. B. Billingsley, Fort Smith. The paper covered a broad and very interesting subject well, and inspired much favorable comment.

"What Is Wrong With Our Medical Society," by Dr. John H. Colay, Cleveland. It was a friendly criticism that might be applied to most officers and members of the average medical society.

Dr. Scarlett reported the action of the House of Delegates at the State meeting. He suggested that at the next meeting the question of a Public Relations Committee be discussed.

The next meeting will be held at St. Mary's Hospital in Russellville, May 19. Dr. J. D. Riley, Superintendent of the Arkansas Tuberculosis Sanatorium, will be the principal speaker.

Book Reviews

A Clinical Study of Addison's Disease. By Leonard G. Rowntree, M. D., and Albert M. Snell, M. D., Division of Medicine, The Mayo Clinic and The Mayo Foundation, Rochester, Minnesota. 12mo of 317 pages with 41 illustrations. Published by W. B. Saunders Company, Philadelphia. Cloth, $4.00 net.

The authors of this book state that Addison's description constitutes one of the great classics of English medicine though it has been seventy-five years since Thomas Addison presented his work on disease of the supravenal capsules, and described the syndrome which bears his name.

A study of patients with this disease, seen at the Mayo Clinic during the last eighteen years and the results of their clinical experience, they are more and more impressed with the prowess of Addison and with his uncanny insight into its nature. Physicians generally will be interested in this work as the disease is one of the most fatal that we have to deal with.

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Diagnostic Methods and Interpretations in Internal Medicine. By Samuel A. Loewenberg, M. D., F. A. C. P., Associate Professor of Medicine, Jefferson Medical College; Assistant Physician to the Jefferson Hospital; Philadelphia. With 547 illustrations, some in Colors. Second Revised Edition. Published by F. A. Davis Company, Philadelphia. Price, $10.00 net.

This book gives instructions on the various methods of examining the patient, descriptions of normal findings, enumeration of pathologic conditions with the normal and pathologic physical signs, and, whenever possible, the reasons for such signs.

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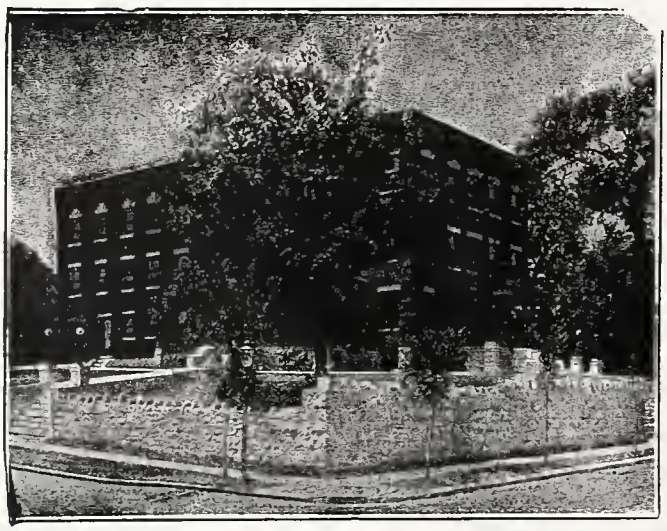

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